

Colorado Register



47 CR 2

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Introduction

The *Colorado Register* is published pursuant to C.R.S. 24-4-103(11) and is the sole official publication for state agency notices of rule-making, proposed rules, attorney general's opinions relating to such rules, and adopted rules. The register may also include other public notices including annual departmental regulatory agendas submitted by principal departments to the secretary of state.

"Rule" means the whole or any part of every agency statement of general applicability and future effect implementing, interpreting, or declaring law or policy or setting forth the procedure or practice requirements of any agency. "Rule" includes "regulation". C.R.S. 24-4-102(15). Adopted rules are effective twenty days after the publication date of this issue unless otherwise specified.

The *Colorado Register* is published by the office of the Colorado Secretary of State twice monthly on the tenth and the twenty-fifth. Notices of rule-making and adopted rules that are filed from the first through the fifteenth are published on the twenty-fifth of the same month, and those that are filed from the sixteenth through the last day of the month are published on the tenth of the following month. All filings are submitted through the secretary of state's electronic filing system.

For questions regarding the content and application of a particular rule, please contact the state agency responsible for promulgating the rule. For questions about this publication, please contact the Administrative Rules Program at rules@coloradosos.gov.

Notice of Proposed Rulemaking

Tracking number

2024-00013

Department

200 - Department of Revenue

Agency

207 - Division of Gaming - Rules promulgated by Gaming Commission

CCR number

1 CCR 207-1

Rule title

GAMING REGULATIONS

Rulemaking Hearing

Date

02/15/2024

Time

09:15 AM

Location

1707 Cole Blvd, Redrocks Conference Room, Lakewood, CO 80401, and virtually

Subjects and issues involved

Amendments to Gaming Rule 21 Rules for Blackjack-Poker Combination Games in order to promulgate rules for a new game, Free Bet Blackjack. This game will be Regulation 30-2116.

Statutory authority

Sections 44-30-201, C.R.S., 44-30-302, C.R.S., 44-30-816, C.R.S., and 44-30-818, C.R.S.

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BASIS AND PURPOSE FOR RULE 21

The purpose of Rule 21 is to establish playing rules for authorized types of games which combine the play of blackjack with the play of poker, and management procedures for conducting blackjack-poker combination games in compliance with section 44-30-302 (2), C.R.S. The statutory basis for Rule 21 is found in sections 44-30-201, C.R.S., 44-30-302, C.R.S., 44-30-816, C.R.S., and 44-30-818, C.R.S.

Amended 8/14/16

RULE 21 RULES FOR BLACKJACK-POKER COMBINATION GAMES

30-2116 THE PLAY – FREE BET BLACKJACK.

FREE BET BLACKJACK IS A BLACKJACK AND POKER VARIATION GAME, THE RIGHTS TO WHICH ARE OWNED BY LNW GAMING, INC OF LAS VEGAS, NV AND WHICH MAY BE TRANSFERRED OR ASSIGNED. FREE BET BLACKJACK SHALL BE DEALT AND PLAYED FOLLOWING ALL STANDARD RULES OF BLACKJACK EXCEPT AS FOLLOWS:

- (1) FREE BET BLACKJACK MUST BE PLAYED ONLY ON TABLE DISPLAYING THE FREE BET BLACKJACK TABLE LAYOUT. FIVE (5), SIX (6) OR EIGHT (8) DECKS CONSISTING OF STANDARD 52-CARD DECKS WILL BE USED.
- (2) EACH PLAYER WILL MAKE AN INITIAL BET IN THE AMOUNT SPECIFIED AT THE TABLE BY THE RETAIL LICENSEE, AND MAY PLACE OPTIONAL PUSH 22, POT OF GOLD, KING'S BOUNTY AND OR PROGRESSIVE BETS IN THE WAGERING AREAS IN FRONT OF THE PLAYER'S POSITION.
- (3) THE PUSH 22 BET IS PLACED TO PLAY AGAINST THE DEALER'S HAND. THE PUSH 22 BET WINS IF THE DEALER DRAWS TO A TOTAL OF 22, AND THE PLAYERS HAND DOES NOT EXCEED A POINT TOTAL OF 21. IN THE EVENT THAT ALL PLAYERS' HANDS BUST OR HAVE BLACKJACKS, THE DEALER WILL DRAW CARDS IN ORDER TO SETTLE THE PUSH 22 BET. THE RANK OF HANDS FOR THIS OPTIONAL BET, FROM HIGHEST TO LOWEST ARE: SUITED 22, COLORED 22 AND OTHER 22.
- (4) WHEN THE OPTION OF POT OF GOLD IS USED THE CASINO MUST USE THE "FREE BET" LAMMER OR COIN, WHICH INDICATES WHEN A PLAYER HAS OPTED TO TAKE A "FREE DOUBLE" OR A "FREE SPLIT". THE POT OF GOLD BET IS PLACED TO PLAY AGAINST THE NUMBER OF FREE BET LAMMERS A PLAYER HAS COLLECTED DURING THE GAME. ALL POT OF GOLD WAGERS LOSE TO A DEALER BLACKJACK.
- (5) THE OPTIONAL KING'S BOUNTY BET IS BASED ON THE FIRST TWO PLAYER CARDS. THE RANK OF HANDS FOR THIS OPTIONAL BET, FROM HIGHEST TO LOWEST ARE 2 KINGS OF SPADES PLUS DEALER BLACKJACK; 2 KINGS OF SPADES; 2 SUITED KINGS; 2 SUITED QUEENS; JACKS OR 10'S; SUITED 20; 2 KINGS; AND UNSUITED 20.
- (6) ANY DEALER TIP DELIVERED AS A WAGER MAY BE PLACED ON ANY OF THE REQUIRED OR OPTIONAL WAGERS, PROVIDED THAT THE PLAYER HAS PLACED A PERSONAL WAGER ON THE SAME BET.
—
 - (A) NOTE: IF THE PLAYER MAKES A BET FOR THE DEALER, THE DEALER IS ALSO ELIGIBLE FOR THE FREE SPLIT AND FREE DOUBLE ALONG WITH THE PLAYER. THE SAME GAME RULES APPLY TO THE DEALERS BET.
- (7) FREE BET BLACKJACK FOLLOWS THE BASIC RULES OF STANDARD BLACKJACK ("21"), WITH THE FOLLOWING FEATURES:
 - (A) "FREE" DOUBLE-DOWN ON FIRST TWO-CARD HARD TOTAL OF 9, 10, OR 11.
 - (B) "FREE" SPLITS ON ALL PAIRS EXCEPT 10 VALUE CARDS (TEN-TEN, JACK-JACK, QUEEN-QUEEN OR KING-KING).

(C) "FREE" DOUBLE-DOWN ALLOWED AFTER SPLIT OR "FREE" SPLIT.

(D) "FREE" RE-SPLITS ALLOWED UP TO FOUR HANDS.

(E) ALL NORMAL SPLITS ALLOWED.

(F) REGULAR DOUBLES ALLOWED ON TWO-CARD HANDS.

(G) DEALER PUSHES WITH A HAND TOTAL OF 22. THE PLAYER'S WAGER IS PUSHED AND THEY WIN THEIR PUSH 22 WAGER.

(H) DEALER HITS ON SOFT-17 (OR AS POSTED AT THE TABLE, DEALER CAN STAND ON 17'S).

(I) BLACKJACK PAYS 3-TO-2 OR 6-TO-5 AS POSTED AT THE TABLE.

(8) FREE SPLITS - PLAYERS MAY SPLIT ANY PAIRS, EXCEPT 10 VALUE CARDS (TEN-TEN, JACK-JACK, QUEEN-QUEEN OR KING-KING), WITHOUT MAKING AN ADDITIONAL WAGER. IF A PLAYER ELECTS TO FREE SPLIT, THE DEALER WILL PLACE A "FREE BET" LAMMER TO THE RIGHT (DEALER'S VIEW) OF THE PLAYER'S ORIGINAL BET AND DEAL THE GAME NORMALLY. AFTER ALL CARDS ARE DEALT AND THE DEALER RESOLVES EACH PLAYER'S HAND STARTING WITH THE PLAYER ON THE FARTHEST RIGHT OF THE DEALER AND CONTINUING COUNTER-CLOCKWISE, THERE ARE THREE POSSIBLE OUTCOMES:

(A) THE PLAYER BEATS THE DEALER.

(i) THE DEALER WILL PAY THE PLAYER FOR THEIR ORIGINAL BET AND AN EQUIVALENT AMOUNT FOR THEIR FREE SPLIT. IF THE PLAYER HAS MADE A POT OF GOLD WAGER, THE LAMMER WILL BE MOVED BY THE DEALER TO A SPOT IN FRONT OF THE PLAYER'S POT OF GOLD WAGER. IF THE PLAYER DIDN'T MAKE THE POT OF GOLD WAGER, THE DEALER WILL COLLECT THE LAMMER.

(B) THE PLAYER LOSES TO THE DEALER.

(i) THE DEALER WILL COLLECT THE PLAYER'S ORIGINAL BET. IF THE PLAYER HAS MADE A POT OF GOLD WAGER, THE LAMMER WILL BE MOVED BY THE DEALER TO A SPOT IN FRONT OF THE PLAYER'S POT OF GOLD WAGER. IF THE PLAYER DIDN'T MAKE THE POT OF GOLD WAGER, THE DEALER WILL COLLECT THE LAMMER.

(C) THE PLAYER AND THE DEALER TIE.

(i) THE DEALER WILL PUSH THE PLAYER'S ORIGINAL BET. IF THE PLAYER HAS MADE A POT OF GOLD WAGER, THE LAMMER WILL BE MOVED BY THE DEALER TO A SPOT IN FRONT OF THE PLAYER'S POT OF GOLD WAGER. IF THE PLAYER DIDN'T MAKE THE POT OF GOLD WAGER, THE DEALER WILL COLLECT THE LAMMER.

(D) NOTE: IF THE PLAYER BUSTS OUT OF THE HAND WITH THE ORIGINAL BET, THE DEALER WILL PLACE THE ORIGINAL HAND FACE DOWN AND PLACE THE BET ON TOP IT. THE DEALER WILL COLLECT THAT BET AT THE END OF THE ROUND. IF SPLIT OR RE-SPLIT HANDS WITH FREE BET LAMMERS WIN, THE DEALER WILL PAY EACH LAMMER THE VALUE OF THE ORIGINAL BET.

(i) FREE RE-SPLITTING UP TO FOUR HANDS IS ALLOWED AND THE DEALER WILL PLACE A FREE BET LAMMER FOR EACH FREE SPLIT THE PLAYER INDICATES THEY WANT.

(ii) IF A PLAYER WANTS TO TAKE ADVANTAGE OF THE FREE SPLIT, THE PLAYER WILL MOTION WITH TWO FINGERS FACE DOWN NEXT TO THEIR ORIGINAL BLACKJACK WAGER TO SIGNIFY THAT THEY WANT THE FREE SPLIT.

- (iii) EACH SPLIT HAND IS WON OR LOST ON ITS OWN MERIT (EX., PLAYER CAN LOSE ORIGINAL BET ON FIRST SPLIT HAND AND STILL WIN ON THE SECOND OR MORE FREE SPLIT HANDS.) IF FREE SPLITTING A PAIR, AND THE FIRST HAND BUSTS, THE CARDS WILL BE TUCKED UNDER THE ORIGINAL WAGER UNTIL THE HAND IS SETTLED OR UNLESS THE SECOND BUSTS AS WELL.

- (9) FREE DOUBLE - PLAYERS MAY DOUBLE A TWO-CARD HARD COUNT OF 9, 10 OR 11 WITHOUT MAKING AN ADDITIONAL WAGER. IF A PLAYER ELECTS TO FREE DOUBLE, THE DEALER WILL PLACE A "FREE BET" LAMMER TO THE RIGHT (DEALER'S VIEW) OF THE PLAYER'S ORIGINAL BET AND DEAL THE GAME NORMALLY. AFTER ALL CARDS ARE DEALT AND THE DEALER RESOLVES EACH PLAYERS' HAND STARTING WITH THE PLAYER ON THE FARTHEST RIGHT OF THE DEALER AND CONTINUING COUNTER-CLOCKWISE, THERE ARE THREE POSSIBLE OUTCOMES:

- (A) THE PLAYER BEATS THE DEALER.

- (i) THE DEALER WILL PAY THE PLAYER FOR THEIR ORIGINAL BET AND AN EQUIVALENT AMOUNT FOR THEIR FREE DOUBLE. IF THE PLAYER HAS MADE A POT OF GOLD WAGER, THE LAMMER WILL BE MOVED BY THE DEALER TO A SPOT IN FRONT OF THE PLAYER'S POT OF GOLD WAGER. IF THE PLAYER DIDN'T MAKE THE POT OF GOLD WAGER, THE DEALER WILL COLLECT THE LAMMER.

- (B) THE PLAYER LOSES TO THE DEALER.

- (i) THE DEALER WILL COLLECT THE PLAYER'S ORIGINAL BET. IF THE PLAYER HAS MADE A POT OF GOLD WAGER, THE LAMMER WILL BE MOVED BY THE DEALER TO A SPOT IN FRONT OF THE PLAYER'S POT OF GOLD WAGER. IF THE PLAYER DIDN'T MAKE THE POT OF GOLD WAGER, THE DEALER WILL COLLECT THE LAMMER.

- (C) THE PLAYER AND THE DEALER TIE.

- (i) THE DEALER WILL PUSH THE PLAYER'S ORIGINAL BET. IF THE PLAYER HAS MADE A POT OF GOLD WAGER, THE LAMMER WILL BE MOVED BY THE DEALER TO A SPOT IN FRONT OF THE PLAYER'S POT OF GOLD WAGER. IF THE PLAYER DIDN'T MAKE THE POT OF GOLD WAGER, THE DEALER WILL COLLECT THE LAMMER.

- (D) FREE DOUBLING AFTER SPLITTING IS ALLOWED, PROVIDED THE PLAYER'S POINT TOTAL IS A TWO CARD HARD TOTAL OF 9, 10 OR 11.

- (10) THE RETAIL LICENSEE MAY OFFER THE GAME USING THE FOLLOWING PAY SCHEDULES. THE PAY SCHEDULES IN USE, OR PAY OUTS DERIVED FROM THE PAY SCHEDULES, MUST BE DISPLAYED ON THE TABLE LAYOUT OR ON SIGNAGE AT THE TABLE:

PUSH 22			
HAND	A	B	C
SUITED 22	50 TO 1	50 TO 1	11 TO 1
COLORLED 22	20 TO 1	20 TO 1	11 TO 1
OTHER 22	8 TO 1	7 TO 1	11 TO 1
OTHER (NOT 22)	LOSE	LOSE	LOSE

POT OF GOLD		
FREE BETS	POG 01*	POG 02*
7	1,000 TO 1	100 TO 1

<u>6</u>	<u>300 TO 1</u>	<u>100 TO 1</u>
<u>5</u>	<u>100 TO 1</u>	<u>100 TO 1</u>
<u>4</u>	<u>60 TO 1</u>	<u>50 TO 1</u>
<u>3</u>	<u>30 TO 1</u>	<u>30 TO 1</u>
<u>2</u>	<u>10 TO 1</u>	<u>12 TO 1</u>
<u>1</u>	<u>3 TO 1</u>	<u>3 TO 1</u>

*PAY OUTS ARE BASED ON THE TOTAL NUMBER OF FREE BET COINS COLLECTED PER BLACKJACK HAND

<u>KING'S BOUNTY</u>	
<u>HAND</u>	<u>KB01</u>
<u>2 KINGS OF SPADES + DEALER BJ</u>	<u>1,000 TO 1</u>
<u>2 KINGS OF SPADES</u>	<u>100 TO 1</u>
<u>2 SUITED KINGS</u>	<u>30 TO 1</u>
<u>2 SUITED QUEENS, JACKS OR 10S</u>	<u>20 TO 1</u>
<u>SUITED 20</u>	<u>9 TO 1</u>
<u>2 KINGS</u>	<u>6 TO 1</u>
<u>UNSUITED 20</u>	<u>4 TO 1</u>

FIRST TWO PLAYER CARDS

Notice of Proposed Rulemaking

Tracking number

2024-00020

Department

200 - Department of Revenue

Agency

211 - Hearings Division

CCR number

1 CCR 211-3

Rule title

RULES FOR THE LENGTH OF RESTRAINT AND ISSUANCE OF PROBATIONARY DRIVER'S LICENSES

Rulemaking Hearing**Date**

02/27/2024

Time

10:00 AM

Location

Zoom Meeting Link: <https://us02web.zoom.us/j/84483688350> Meeting ID: 844 8368 8350

Subjects and issues involved

The purpose of this rule is to establish aggravating and mitigating factors that a Hearing Officer will consider when determining the duration of Restraint or whether a PDL will be granted. The purpose of the proposed amendment is to avoid confusion by changing Rule 3(A)(1)(b) back to the original language for this aggravating factor by removing the language added to the rule in 2023.

Statutory authority

The statutory bases for this rule are sections 24-1-107, 24-1-117, 24-35-103, 42-1102(24), 42-1-201, 42-1-204, 42-2-126(3)(b), 42-2-127, and 42-2-127.9, C.R.S.

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DEPARTMENT OF REVENUE

Hearings Division

RULES FOR THE LENGTH OF RESTRAINT AND ISSUANCE OF PROBATIONARY DRIVER'S LICENSES

1 CCR 211-3

[Editor's Notes follow the text of the rules at the end of this CCR Document.]

RULE 1. DEFINITIONS

Basis and Purpose: This Rule is promulgated pursuant to §§ 24-1-107, 24-1-117, 24-35-103, 42-1-102(24), 42-1-201, 42-1-204, 42-2-126(3)(b), 42-2-127, and 42-2-127.9, C.R.S. The purpose of this Rule is to define words and terms of art used in these Rules and in the administrative proceedings held by the Colorado Department of Revenue's Hearings Division in which a PDL is either issued or denied.

- A. "Base Period" – Means six months.
- B. "Carelessness" – Means either:
 - 1. Driving that meets the definition of carelessness under § 42-4-1402, C.R.S. and resulted in a conviction for Careless Driving appearing in a Respondent's Driver History; or
 - 2. Driving that meets the definition of carelessness under § 42-4-1402, C.R.S. but did not result in a conviction for Careless Driving.
- C. "Department" – The Colorado Department of Revenue.
- D. "Driver History" – The Department's computer-generated report on a specific driver, including, but not limited to: the driver's name, address, and license status; documents issued to the driver; and abstracts of citations, Restraints, outstanding judgments and unpaid citations.
- E. "Driver Record" – Any and all records pertaining to the Respondent held by the Department pursuant to § 42-2-121, C.R.S.
- F. "Evidence of Insurance" – Proof provided by the Respondent to the Department that the Respondent has a compliant insurance policy in full force and effect as required by Part 6 of Article 4 of Title 10, C.R.S. Proof may be made through presentation of either a copy of such complying insurance policy or a card issued to the Respondent by the insurance carrier reflecting such policy.
- G. "Hearing Officer" – An authorized representative of the Executive Director of the Department, with the statutory authority to conduct hearings pursuant to Titles 24 and 42, C.R.S.
- H. "PDL" or "Probationary Driver's License" – A document issued by the Department authorizing a driving privilege restricted to driving only at certain times and locations and for certain purposes established either by statute, by rule, or upon terms and conditions set forth by a Hearing Officer at hearing. PDLs may be issued for a period no longer than the term of the suspension under which the license is authorized.

- I. "PDL Restrictions Page" – A document issued by the Department that authorizes and sets forth the specific terms and conditions of the PDL. The PDL Restrictions Page must be carried with the PDL for the term of the suspension under which the PDL is authorized.
- J. "Respondent" – The person whose driving privilege is the subject of the hearing.

RULE 2. LENGTH OF RESTRAINT

Basis and Purpose: This Rule is promulgated pursuant to §§ 24-1-107, 24-1-117, 24-35-103, 42-1-102(24), 42-1-201, 42-1-204, 42-2-126(3)(b), 42-2-127, and 42-2-127.9, C.R.S. The purpose of this Rule is to describe the factors that a Hearing Officer will consider when determining the length of Restraint.

- A. The Hearing Officer shall consider public safety as well as modification of the Respondent's future driving behavior in determining the length of Restraint for hearings conducted pursuant to § 42-2-127, C.R.S. The Hearing Officer must consider the Respondent's driving history as a whole. The Hearing Officer has discretion in determining the weight to be given to any aggravating or mitigating factor and whether to issue a PDL.
- B. In any hearing for an action where the Hearing Officer has discretion to determine the length of the Restraint, other than for actions pursuant to § 42-2-132.5, C.R.S., the aggravating and mitigating factors set forth in these Rules shall be the primary basis used for determining the length of the Restraint.
 - 1. Where the Hearing Officer finds that the aggravating and mitigating factors weigh evenly, the duration of the Restraint shall be the Base Period;
 - 2. Where the Hearing Officer finds that the aggravating factors outweigh the mitigating factors, the duration shall be longer than the Base Period;
 - 3. Where the Hearing Officer finds that the mitigating factors outweigh the aggravating factors, the duration shall be shorter than the Base Period.

RULE 3. AGGRAVATING AND MITIGATING FACTORS

Basis and Purpose: This Rule is promulgated pursuant to §§ 24-1-107, 24-1-117, 24-35-103, 42-1-102(24), 42-1-201, 42-1-204, 42-2-126(3)(b), 42-2-127, and 42-2-127.9, C.R.S. The purpose of this rule is to establish aggravating and mitigating factors that a Hearing Officer will consider when determining the duration of Restraint or whether a PDL will be granted.

- A. Aggravating Factors:
 - 1. The Hearing Officer shall consider the following as aggravating factors.
 - a. Any collision involving death or bodily injury to another where the Respondent is determined to be at fault on the basis of a conviction, accident report or other evidence presented at hearing;
 - b. Any conviction for a violation that carries a point assessment of six or more points prior to any point reductions authorized for prompt payment ~~or plea agreement that amends charges to one or more different offenses;~~
 - c. Any conviction for an offense specifically designated by the habitual offenders law, § 42-2-202, C.R.S., *et seq.*;

- d. Carelessness as shown by the Driver Record and/or information gathered at hearing;
- e. Repeated or willful disregard for the law or public safety as shown by the Driver Record and/or information gathered at hearing;
- f. Conviction for any driving violation involving alcohol or drugs;
- g. A prior driver's license Restraint with an end date within seven (7) years of the hearing date;
- h. A prior issuance of a PDL within seven (7) years of the hearing date;
- i. Respondent's degree of truthfulness and candor at the hearing;
- j. Any evidence of a violation of the terms and/or conditions of any previously issued PDL;
- k. One or more traffic collisions where the Respondent was found to be at fault;
- l. Any evidence of failing to be an insured driver at any time Respondent was operating a motor vehicle; and
- m. Respondent's demonstrated failure to accept responsibility and/or understanding of a need to change driving behavior.

B. Mitigating Factors

- 1. The Hearing Officer shall consider the following as mitigating factors. The Hearing Officer shall have sole discretion in determining the weight to be given any mitigating factor:
 - a. Respondent's demonstrated efforts to correct behavior that led to the Restraint under consideration;
 - b. Any errors by the Department that have adversely affected the Respondent's driving privileges;
 - c. Time without driving already served under any currently active Restraint if Restraints were caused by the same event(s);
 - d. Lack of traffic violations committed subsequent to the time frame under consideration;
 - e. In cases where there is evidence that Respondent has an alcohol or substance abuse problem, evidence demonstrating such problem is under control;
 - f. Respondent's completion of a safe driving course prior to the date of the hearing;
 - g. Respondent's demonstrated acceptance of responsibility and understanding of a need to change driving behavior;
 - h. Respondent's truthfulness or candor at the hearing, as determined by the Hearing Officer; and
 - i. Any factors the Respondent establishes that mitigate the severity of the record.

RULE 4. PDL CONSIDERATION

Basis and Purpose: This rule is promulgated pursuant to §§ 24-1-107, 24-1-117, 24-35-103, 42-1-102(24), 42-1-201, 42-1-204, 42-2-126(3)(b), 42-2-127, and 42-2-127.9, C.R.S. The purpose of this rule is to describe certain factors that a Hearing Officer must consider when deciding whether to issue a PDL in an administrative proceeding before the Division regarding a driver's license. It also clarifies Hearing Officer discretion to include an Interlock requirement as part of a PDL.

- A. When exercising discretion to issue a PDL pursuant to Title 42, C.R.S., the Hearing Officer shall consider public safety as well as modification of Respondent's future driving behavior in determining whether it is appropriate to issue a PDL. The Hearing Officer must consider the Respondent's driving history as a whole. The Hearing Officer shall have discretion in determining the weight to be given any aggravating or mitigating factor listed in Rule 3. The aggravating and mitigating factors set forth in Rule 3 shall be the primary basis used for determining whether to issue a PDL.
- B. For PDLs issued in hearings conducted pursuant to § 42-2-127, C.R.S. where the license is suspended, in part, due to a conviction for DUI, DWAI, DUI per se, or UDD pursuant to § 42-2-127.9, C.R.S., the Hearing Officer may only deny a PDL if there is a statutory reason for denial or if aggravating circumstances exist in the Driver Record, or as presented at the hearing, showing Respondent is unsafe to drive for any reason. The Hearing Officer shall make specific findings to support such denial of the PDL.
- C. For PDLs granted to Respondents with existing Interlock restricted licenses, Respondents who would have this restriction upon reinstatement of the Respondent's privilege, or Respondents who are persistent drunk drivers as defined in § 42-1-102(68.5), C.R.S., the PDLs must include the Interlock requirement. The Hearing Officer has the discretion to impose an Interlock requirement in the PDL in other circumstances when deemed reasonable and necessary upon evidence showing the Respondent's history of alcohol-related convictions and/or Restraints, even though the Interlock restriction may no longer be statutorily mandated.

RULE 5. PDL ISSUANCE

Basis and Purpose: This rule is promulgated pursuant to §§ 24-1-107, 24-1-117, 24-35-103, 42-1-102(24), 42-1-201, 42-1-204, 42-2-126(3)(b), 42-2-127, and 42-2-127.9, C.R.S. The purpose of this rule is to describe when a PDL must be denied due to ineligibility, Hearing Officer discretion to issue a PDL to eligible respondents, and Hearing Officer discretion to determine the specific restrictions of a PDL.

- A. The Hearing Officer shall review the Respondent's Driver Record for the purposes of ensuring that the Respondent is eligible for a PDL. The Hearing Officer shall deny a PDL in the following circumstances:
 - 1. The Respondent has another active or pending Restraint for which they are not fully eligible for reinstatement, and which Restraint does not permit the issuance of a PDL;
 - 2. The Respondent has never held a valid driver's license issued by Colorado or any other state;
 - 3. The Respondent has an outstanding violation, where a conviction would result in a Restraint for which no PDL is available;
 - 4. The Respondent has had a PDL within 7 years of the hearing date, unless the Hearing Officer makes specific findings that the mitigating factors outweigh this serious aggravating factor. Prior issuance of a PDL is alone sufficient reason for denial.

- B. In any hearing where the Hearing Officer has discretion to issue or deny a request for a PDL, the aggravating and mitigating factors set forth in these Rules shall be used to determine whether or not a request for a PDL will be approved.
- C. If the Hearing Officer authorizes the PDL, the Hearing Officer must then determine, based on the aggravating and mitigating factors, other information appearing on the Driver Record, and information gathered at the hearing, the terms, conditions and restrictions under which the PDL will issue.
- D. Any PDL issued must include all restrictions and conditions required by applicable statute.
- E. A PDL shall not include operation of any commercial motor vehicle as defined by law, or driving on the job for any Respondent under the age of seventeen.
- F. A PDL shall not be used for operation of a motor vehicle outside of the State of Colorado.
- G. If proficiency testing is required for reinstatement under the active or pending Restraint, the Hearing Officer may allow the Respondent to drive under the authority of the PDL to complete such proficiency testing.

RULE 6. CANCELLATION OF A PDL

Basis and Purpose: This rule is promulgated pursuant to §§ 24-1-107, 24-1-117, 24-35-103, 42-1-102(24), 42-1-201, 42-1-204, 42-2-126(3)(b), 42-2-127, and 42-2-127.9, C.R.S. The purpose of this rule is to describe the circumstances for cancelling a PDL and process for reviewing cancellation of a PDL.

- A. The Department may cancel a PDL if it determines Respondent violated a restriction of the PDL or upon notification of a moving traffic violation while driving with a PDL. Notification can include a citation, incident report, or other reliable communication from a law enforcement officer.
- B. The Respondent may request a hearing by telephone, in person, or in writing on the issue of PDL cancellation. The Respondent must surrender any license or permit at the time of the request, unless the PDL has been previously surrendered to the Department or to a law enforcement officer.
- C. The hearing shall be held as promptly as possible with consideration given to the docketing requirements for the hearing location, the schedule of the Respondent and any representative of the Respondent, and the availability of a Hearing Officer.
- D. The Department and/or the Respondent may submit evidence or present testimony at the hearing.
- E. After consideration of the evidence, the Hearing Officer shall make a final decision regarding the cancellation of the PDL. The Hearing Officer may sustain the cancellation, re-issue the PDL, or modify the terms and conditions of the PDL.

Editor's Notes

History

Entire rule eff. 03/04/2007

Entire rule eff. 05/30/2009.

Entire rule eff. 11/29/2023.

Notice of Proposed Rulemaking

Tracking number

2024-00019

Department

300 - Department of Education

Agency

301 - Colorado State Board of Education

CCR number

1 CCR 301-37

Rule title

RULES FOR THE ADMINISTRATION OF THE EDUCATOR LICENSING ACT OF 1991

Rulemaking Hearing

Date

03/13/2024

Time

09:00 AM

Location

201 E. Colfax, Denver

Subjects and issues involved

These rules require updates based on statutory changes by the 2023 legislative session, primarily:

A new teacher degree apprenticeship authorization (established by Senate Bill 23-087 [22-60.5-111(16), C.R.S.])

The consolidation of authorization and reauthorization of educator preparation programs under the department (per Senate Bill 23-258 [22-60.5-121, C.R.S.])

The alignment of traditional and alternative program standards (per Senate Bill 23-258 [22-60.5-121, C.R.S.])

Other updates include:

Revisions to special education director endorsement requirements

Statutory authority

The statutory basis for these rules is found in section 22-60.5-101, et seq, C.R.S., the Colorado Educator Licensing Act of 1991, and section 22-2-109(1), C.R.S.

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DEPARTMENT OF EDUCATION

Colorado State Board of Education

COLORADO EDUCATOR LICENSING ACT OF 1991

1 CCR 301-37

[Editor's Notes follow the text of the rules at the end of this CCR Document.]

1.00 Statement of Basis and Purpose

The statutory basis for these rules is found in section 22-60.5-101, et seq, C.R.S., the Colorado Educator Licensing Act of 1991, and section 22-2-109(1), C.R.S., State board of education – additional duties. These rules establish the standards and criteria for the issuance of licenses and authorizations to teachers, special services providers, principals, and administrators. The Act calls for the State Board of Education to adopt rules for a three-tiered system of licensure for education personnel which includes an initial license for entry-level educators, a professional license for experienced educators, and a voluntary master certificate for outstanding educators. [Section 22-60.5-106, C.R.S. requires the State Board to establish appropriate license endorsement areas and their eligibility criteria. Those endorsements and criteria are set forth in 1 CCR 301-101.](#)

These rules also provide for the issuance of special authorizations to educators as necessary to meet the needs of Colorado schools and students. Standards and processes for the approval of educator preparation programs through institutions of higher education and other designated agencies are provided. Criteria for the renewal of licenses and authorizations, which provide for significant involvement of practicing educators, are established. Standards for endorsement in subject areas or other areas of educational specialization are prescribed.

These rules provide a process for the recognition of educator preparation programs in other states to facilitate the movement of educators among states. The rules establish the requirements for induction programs to assist new educators through support, supervision, ongoing professional development and evaluation.

The rules establish the standards and processes by which licenses may be denied, suspended, annulled or revoked for conviction of certain criminal offenses, unethical behavior, professional incompetence, and other reasons enumerated by statute. Other miscellaneous provisions are included to meet the requirements of the Act.

2.00 General Licensing Regulations

The Colorado Department of Education has the sole authority to issue educator licenses and authorizations. Pursuant to sections 22-63-201 and 22-32-126, C.R.S., a Colorado license or authorization is required for employment as a teacher, special services provider, or principal in a Colorado school or school district. All licenses and authorizations must be endorsed to indicate the grade levels/developmental levels and specialization area(s) which are appropriate to the applicant's preparation, training, and experience.

2.01 Definitions

2.01(1) Accepted institution of higher education: An institution of higher education that offers at least the standard bachelor's degree and is recognized by one of the following regional associations: Western

Association of Schools and Colleges; Northwest Commission on Colleges and Universities; Higher Learning Commission; New England Commission of Higher Education; Southern Association of Colleges and Schools; or Middle States Commission on Higher Education.

2.01(2) Administrator: Any person who may or may not be licensed, but who administers, directs or supervises an education instructional or education-related program, or a portion thereof, in any school or school district, or nonpublic school in the state and who is not the chief executive officer or an assistant chief executive officer of such school.

2.01(3) Alternative principal: Any person employed as the chief executive officer or an assistant chief executive officer of any school in the state to administer, direct or supervise the education instruction program in such school or nonpublic school under a principal authorization and is actively participating in an alternative principal program or an individualized alternative principal program.

2.01(4) Alternative principal program: a program of study provided by a designated agency, as described in section 22-60.5-305.5(6), C.R.S., for principal preparation designed to provide the information, experience, and training to enable participants to develop the skills and obtain experience and training comparable to that possessed by a person who qualifies for an initial principal license.

2.01(5) Alternative teacher contract: A one- or two-year contract, as described in section 22-60.5-207 C.R.S., entered into by a holder of an alternative teacher license pursuant to section 22-60.5-201(1)(a), C.R.S., or an interim authorization pursuant to 22-60.5-111(7), C.R.S., and a school district, board of cooperative services, nonpublic school, or charter school that provides or participates in, a one-year or two-year alternative teacher program.

2.01(6) Alternative teacher program: A one-year or two-year program of study and training for teacher preparation for a person of demonstrated knowledge and ability who holds an alternative teacher license or an interim authorization. An alternative teacher program must meet the standards of and obtain the approval of the state board of education and, upon completion, lead to a recommendation for licensure by the designated agency providing the alternative teacher program.

2.01(7) Alternative teacher support team: A team established by the designated agency for each holder of an alternative teacher license or an interim authorization pursuant to 22-60.5-111(7), C.R.S., employed as an alternative teacher. At a minimum, each alternative teacher support team must be composed of the alternative teacher's mentor, the building principal and a representative of the approved designated agency.

2.01(8) Alternative teacher: Any person employed to instruct students in any public or nonpublic school in the state under an alternative teacher license or interim authorization pursuant to 22-60.5-111(7) and actively participating in an alternative teacher program.

2.01(9) Approved content tests: assessments approved by the State Board of Education for the purpose of evaluating the required subject matter knowledge and skills for a license, authorization, and/or endorsement.

2.01(10) Approved induction program: A program of continuing professional development for initial license-holders that meets the requirements of and is approved by the State Board of Education, and that upon completion leads to a recommendation for a professional license by the school district or districts, charter school, nonpublic school, or the institute providing such induction program.

2.01(11) Approved program of educator preparation: A program of study for the preparation of educators, approved by the State Board of Education, that prepares educator candidates to meet the quality standards established pursuant to section 22-9-105.5 (10), C.R.S. and the requirements for licensure endorsement(s) adopted by state board rule pursuant to section 22-60.5-106, C.R.S. and which meets the requirements of the State Board of Education as outlined in 1 CCR 301-37 and 1 CCR 301-104 for public

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~~and private institutions, is approved by Colorado Commission on Higher Education, and that, upon completion, leads to a recommendation for licensure, by an accepted institution of higher education.~~

2.01(12) Board of Cooperative Services (BOCES): A regional educational service unit designed to provide supporting, instructional, administrative, facility, community or any other services contracted by participating members.

2.01(13) Board of education: The governing body authorized by law to administer the affairs of any school district in the state except junior and community college districts. "Board of education" also includes a BOCES organized pursuant to section 22-5-101, C.R.S. 2.01(14) Charter school: A school authorized by a school district pursuant to Part 1 of Article 30.5 of Title 22 or a school authorized by the state charter school institute pursuant to Part 5 of Article 30.5 of Title 22.

2.01(14) Colorado Academic Standards: The state academic standards that identify the knowledge and skills that a student should acquire as the student progresses from preschool through elementary and secondary education, as adopted by the State Board of Education pursuant to section 22-7-1005, C.R.S. The Colorado Academic Standards are available at www.cde.state.co.us.

2.01(15) Colorado Teacher of the Year: The Colorado teacher selected as Teacher of the Year in the state program administered by the Department and coordinated through the national teacher of the year program.

2.01(16) Critical teacher shortage: A grade level or content area in which a local education provider (LEP) determines there is a severe need and impact on students and in which an LEP has been unable to place an appropriately licensed teacher in the vacant position(s) despite reasonable attempts to fill the position.

2.01(17) Department of Education or Department: The Colorado State Department of Education (CDE) as defined in section 24-1-115, C.R.S.

2.01(18) Designated agency: A school district or districts, a BOCES, an accepted institution of higher education, a nonprofit organization, a charter school, nonpublic school, the institute, or any combination thereof, that is responsible for the organization, management and operation of an alternative teacher program or an alternative principal program.

2.01(19) Diversity: The backgrounds of all students and school personnel.

2.01(20) Endorsement: The designation on a license or an authorization of grade level(s) or developmental level(s), subject matter, or service specialization in accordance with the preparation, training and experience of the holder of such license or authorization. Endorsements typically reflect major areas of specialization.

2.01(21) Field-based experiences: Experiences conducted at a school site, school administration center, school clinic, or community agency. These experiences may include classroom observations; tutoring; assisting school principals, administrators, teachers or special services providers; participation in school- and community-wide activities; student teaching or internships.

2.01(22) Individualized alternative principal program: Created in collaboration between a school district, charter school, the institute, or nonpublic school and an individual identified as requiring principal preparation, it is a plan of preparation that aligns to the Principal Quality Standards in section 6.00 of these rules and comprises coursework, practicums, and other educational requirements the individual will complete while serving as a principal or assistant principal under a principal authorization in the collaborating school district, charter school, the institute or nonpublic school.

2.01(23) Institute: The state charter school institute created pursuant to section 22-30.5-503, C.R.S.

2.01(24) Licensure: The official recognition by a state governmental agency that an individual has met state-mandated minimum requirements and is approved to practice as a duly certified/licensed educator in the state.

2.01(25) Local education provider (LEP): A school district, a charter school authorized by a school district pursuant to Part 1 of Article 30.5 of Title 22, C.R.S., a charter school authorized by the State Charter School Institute pursuant to Part 5 of Article 30.5 of Title 22, C.R.S., or a BOCES created and operating pursuant to Article 5 of Title 22, C.R.S. that operates a public school.

2.01(26) Mentor administrator: Any administrator who is designated by a school district or districts, charter school, nonpublic school, or the institute providing an approved induction program for initial administrator license-holders, who has demonstrated outstanding administrative skills and school leadership and who can provide exemplary modeling and counseling to initial administrator license-holders participating in an approved induction program.

2.01(27) Mentor principal: Any principal who is designated by a school district or districts, charter school, nonpublic school, or the institute providing an approved induction program for initial principal license-holders, who has demonstrated outstanding principal skills and school leadership and who can provide exemplary modeling and counseling to initial principal license-holders participating in an approved induction program.

2.01(28) Mentor special services provider: Any special services provider who is designated by a school district or districts, charter school, nonpublic school, or the institute providing an approved induction program for initial special services license-holders, who has demonstrated outstanding special services provider skills and school leadership and who can provide exemplary modeling and counseling to initial special services license-holders participating in an approved induction program.

2.01(29) Mentor Teacher:

2.01(29)(a) A teacher who holds a professional license designated by a school district, charter school, or nonpublic school employing an alternative teacher, who has demonstrated outstanding teaching and school leadership and who can provide exemplary modeling and counseling to alternative teachers participating in an alternative teacher program; or

2.01(29)(b) Any teacher who is designated by a school district or districts, charter school, nonpublic school, or the institute providing an approved induction program for initial teacher license-holders, who has demonstrated outstanding teaching and school leadership and who can provide exemplary modeling and counseling to initial teacher license-holders participating in an approved induction program.

2.01(30) Nonpublic School: Any independent or parochial school that provides a basic academic education. Neither the State Board of Education nor any local school board has jurisdiction over the internal affairs of any independent or parochial school in Colorado.

2.01(31) Practicum: An intensive experience in which candidates practice and demonstrate professional skills and knowledge. Student teaching and internships are examples of a practicum.

2.01(32) Principal: Any person who is employed as the chief executive officer or an assistant chief executive officer of any school in the state and who administers, directs or supervises the education instruction program in such school or nonpublic school.

2.01(33) Qualified, licensed teacher: An individual who holds a valid Colorado teaching license in the grade level and subject endorsement area(s) in which that individual teaches or will teach.

2.01(34) Rural school district: A school district in Colorado that the Department determines is rural, based on the district's geographic size and its distance from the nearest large, urbanized area, with a total student enrollment of 6,500 students or fewer students.

2.01(35) School: Any of the public schools of the state.

2.01(36) School district: Any school district organized and existing pursuant to law, but not including junior or community college districts. "School district" includes a BOCES organized pursuant to 22-5-101, C.R.S.

2.01(37) Special services provider: Any person other than a teacher, principal or administrator who is employed by any school district, charter school, nonpublic school or the institute to provide professional services to students in direct support of the education instructional program.

2.01(38) Specialization area: The sequence of courses and experiences in the academic or professional area that the candidate plans to teach, for the grade level(s) or developmental level(s) at which the candidate plans to teach, and/or for the services that the candidate plans to provide. Examples of specialty areas include science (grades 7-12), elementary education (grades K-6), early childhood education (ages birth-8), reading specialist (grades K-12) and physical education (grades K-12).

2.01(39) State Board of Education: The Colorado State Board of Education established by section 1 of Article IX of the Constitution of the State of Colorado.

2.01(40) Student teaching: Part of the field or clinical experience required in a teacher preparation program as identified in section 23-1-121(2)(d), C.R.S., that is an in-depth, direct teaching experience conducted in a school and classroom setting. It is considered a culminating field-based experience for the basic teacher preparation program where candidates practice and demonstrate professional skills and knowledge.

2.01(41) Teacher: Any person employed to instruct students in any public or nonpublic school in the state.

2.01(42) Teacher apprentice: a person who is registered and enrolled in a state-approved teacher degree apprenticeship program (pursuant to section 22-60.5-111.5, C.R.S.), is enrolled in an affiliated bachelor's degree program from an accredited institution, and holds a teacher apprenticeship authorization~~licensed pursuant to section 22-60.5-111(16), C.R.S.~~

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2.01 (43) Teacher of record: A person licensed pursuant to section 22-60.5-201(1)(a.5), C.R.S.

2.02 Validity of certificates/license.

2.02(1) Certificates and letters of authorization issued by the Department prior to July 1, 1994, must remain valid for the period for which they were issued.

2.02(2) Endorsements placed on teacher or special services certificates prior to July 1, 1994, which were based on major areas of specialization or experience and academic credit, may be issued on subsequent teacher or special services license renewals provided all renewal requirements specified in section 7.00 of these rules have been met.

2.02(3) Certificates, licenses and authorizations which have expired are not valid unless the applicant has a complete and active application on file with the Department before the expiration date identified on the applicant's current and active educator license, certificate or authorization.

2.03 General Requirements for Colorado Licenses

2.03(1) Degree. Each applicant for a Colorado license must hold the appropriate academic degree for the license and/or endorsement sought from an accepted institution of higher education.

2.03(1)(a) It will be determined that an applicant "holds" or "has been awarded" the bachelor's or higher degree when the registrar of the accepted institution of higher education certifies that the applicant has met all institutional requirements for graduation with the degree, whether or not the degree has been conferred upon the applicant in formal ceremonies or otherwise conveyed to the individual.

2.03(1)(b) The Department and accepted institutions of higher education may recognize credits and degrees earned in foreign institutions of higher education if, after appropriate evaluation by an established credentials evaluation service as selected by the Department, there is evidence that such credits and degrees are the equivalent of those approved as fulfilling the specific license requirements.

2.03(2) Approved program of preparation. An initial license may be issued upon satisfactory completion of an approved program of preparation, an alternative teacher program, an alternative principal program, an individualized alternative principal program or an out-of-state educator preparation program approved or authorized by a state other than Colorado as defined in section 2.03(3)(b) of these rules, and upon demonstration of required competencies as specified in these rules and in 1 CCR 301-101 Rules for the Administration of Educator License Endorsements. Applicants who completed an approved program in a state other than Colorado must meet the requirements in section 2.03(3) of these rules.

2.03(3) Out-of-state applicants. An initial license may be issued to an applicant from another state or country whose qualifications meet or exceed the requirements of the State Board of Education and who has met the following requirements:

2.03(3)(a) has completed the appropriate degree, experiences and educational level for the license and endorsement(s) requested as specified in these rules;

2.03(3)(b) has successfully completed an educator preparation program approved or authorized by a state other than Colorado, including a program at an accepted institution of higher education in the endorsement area sought or another educator preparation program, including an alternative teacher preparation program;

2.03(3)(c) has successfully completed field-based experience that meets or exceeds Colorado's field-based experience requirement as provided by section 23-1-121(2)(d), C.R.S.;

2.03(3)(d) holds a standard license issued by the state education agency of another state or country, is eligible to hold a standard license issued by the state education agency of the preparing state, or meets the official requirements of the legally designated licensing agency of the preparing state; and

2.03(3)(e) has demonstrated professional competencies and depth of content knowledge appropriate to the license and endorsement requested.

2.03(4) An out-of-state applicant must meet the subject matter knowledge requirements for every endorsement sought by demonstrating professional competencies and depth of content knowledge for each endorsement or by providing evidence of completion of three or more years of successful full-time, fully licensed, evaluated, post-preparation experience in the endorsement area(s) sought within the previous seven years as a teacher, special services provider, principal or administrator in an established elementary or secondary school in another state or country.

2.03(4)(a) Applicants who satisfy the requirements of sections 2.03(3)(a)-(d) but not 2.03(3)(e) may be eligible for an interim authorization as provided in section 4.09 of these rules.

2.03(4)(b) Applicants who satisfy the requirements in sections 2.03(3)(a)-(d) but not 2.03(3)(e) and who provide evidence of completion of three or more years of successful full-time, fully licensed,

evaluated post-preparation experience within the previous seven years as a teacher, special services provider, principal, or administrator in an established elementary or secondary school in another state or country, may be eligible for a Colorado professional license.

2.03(5) The State Board of Education may enter into interstate reciprocal agreements whereby the Department agrees to issue initial licenses to persons licensed in other states and such states agree to issue licenses to Colorado license-holders. Such agreements must not be inconsistent with section 2.03(3) of these rules.

2.03(6) Pursuant to section 22-60.5-201(3)(c), C.R.S., the state board may annually designate teacher shortage areas and modify the requirements in sections 4.00 and 5.00 of 1 CCR 301-101 for licensure and endorsement in such shortage areas for the purpose of issuing initial teacher licenses or interim authorizations as outlined in these rules to applicants.

2.03(7) Pursuant to section 22-60.5-201(3.5), C.R.S., the Department may issue professional teacher licenses to applicants who have earned and present certificates issued by the National Board for Professional Teaching Standards.

2.04 Application Procedures

2.04(1) Prior to submitting to the Department an application for a license, authorization, or endorsement, or for the renewal of a license or authorization, the applicant must submit to the Colorado Bureau of Investigation (CBI) a complete set of his or her fingerprints taken by a qualified law enforcement agency, an authorized employee of a school district or BOCES using fingerprinting equipment that meets the Federal Bureau of Investigation image quality standards, or any third party approved by the CBI for the purpose of obtaining a criminal history record check, and any fingerprint processing fee(s).

2.04(1)(a) The applicant must give his or her social security number, if any, to the CBI and must indicate to the CBI that the criminal history is to be forwarded to the Department.

2.04(1)(a)(i) If an individual submits an application or renewal application after the expiration of a credential, the individual must submit a new, complete set of fingerprints to the CBI.

2.04(1)(a)(ii) If an applicant previously submitted a complete set of fingerprints to the CBI pursuant to section 22-2-119.3, C.R.S., the individual need not submit a new set of fingerprints unless: (1) he or she has not continuously resided in Colorado for more than one full year; (2) he or she submits an application or renewal application after the expiration of a credential from the Department; or (3) the individual has been convicted of a felony or misdemeanor, other than a misdemeanor traffic offense or traffic infraction, subsequent to the educator's licensure or authorization.

2.04(2) An applicant must submit a complete application to the Department via its online system, which includes all required information and documentation as set forth in these rules, the application form, and any other application instructions published by the Department on its website. Required information and documentation includes that which the applicant is responsible for submitting and any other information and documentation that may be required from other sources to support the application, including but not limited to the following:

2.04(2)(a) The applicant must provide official transcripts showing conferral of the degree required for the license and endorsement sought:

2.04(2)(a)(i) Each transcript must be authentic, original or photocopy, bearing the printed or embossed seal of the institution and the signature of the registrar, and include descriptive titles, course numbers, credits and grades for each course listed and degrees conferred, if any. For the purpose of these rules, credits must be in semester hours. Quarter, trimester, unit or term credits will be converted to

semester hours at the time of evaluation. Submission of an incomplete, unofficial or illegible transcript will render an application incomplete.

2.04(2)(a)(ii) Transcripts from institutions of higher education outside the United States must be evaluated by an established credential evaluation service, selected by the Department, for course equivalence.

2.04(2)(a)(iii) Copies of official transcripts submitted with an application become part of the applicant's record with the Department and are not returnable.

2.04(2)(b) The applicant must provide an institutional recommendation from the educator preparation program, appropriate to the license sought and on the Department's program verification form, which at a minimum confirms: the date of completion of an educator preparation program; endorsement area(s) and grade level(s); completion of student teaching, clinical experience or practicum; that the applicant holds or is eligible to hold a license in the preparing state or territory; and any additional information requested on the Department form.

2.04(2)(b)(i) The recommendation must certify that the applicant completed the educator preparation program in a satisfactory manner and is in good standing; and

2.04(2)(b)(ii) The recommendation must indicate the subject and level or grades of student teaching, the number of hours of field-based experience performed, and the area of recommended endorsement as defined in 1 CCR 301-101 Rules for the Administration of Educator License Endorsements.

2.04(2)(b)(iii) An individual applying for an initial license or professional license for the first time who holds a valid license or certificate in another state and demonstrates three or more years of successful full-time, evaluated, fully licensed teaching experience (post completion of an educator preparation program) within the previous seven years may be exempt from the institutional recommendation requirement.

2.04(2)(c) When demonstrating professional competencies and depth of content knowledge by approved content test(s), the applicant must provide a copy of the official test score report(s). Submission of a score report for a test not approved by the state board at the time of application will render the application incomplete. When demonstrating professional competencies and depth of content knowledge by portfolio submission, achievement of sufficiently high education course work grades, or a combination of methods, failure to submit the documentation or other evidence required by state board rule for the license sought will render the application incomplete.

2.04(2)(d) Out-of-state applicants must include a copy of any and all educator credentials held (valid or expired) in other states or territories.

2.04(2)(e) The applicant must submit the following to verify their identity:

2.04(2)(e)(i) the applicant's name and mailing address; and

2.04(2)(e)(ii) applicant's social security number, or if unavailable, the individual taxpayer identification number, or one of the following documents verifying the applicant's identity: a clear copy of one of the following forms of government-issued photo identification: a valid passport or passport card; a valid driver's license from any state; an identification card or document from any state; a United States military card or a military dependent identification card; a United States Coast Guard Merchant Mariner card; or a Native American tribal document.

2.04(2)(f) The applicant must submit a complete and accurate response, including but not limited to every required disclosure, form and supporting document, to every applicable section of the online

application and attest that all information submitted is true and complete to the best of the applicant's knowledge.

2.04(3) The fee for the evaluation and review of an application is established by the State Board of Education and shall be nonrefundable.

2.04(4) In any application for licensure, the applicant must indicate all endorsements sought and pay the established fees for the requested endorsement(s) at the time of submission of the application. If an applicant fails to indicate an endorsement(s) sought in a license application and subsequently seeks an endorsement, the Department will not consider the endorsement request until the applicant submits a complete added endorsement application and all required fees.

2.04(5) An application is deemed complete when all required information, documentation and fees are received by the Department. An application that fails to include required information, documentation or fees will be deemed incomplete. Within 45 days of submission of an application, applicants will be notified if their application is incomplete. An applicant whose application is deemed incomplete may cure the deficiency or submit to the Department a written request for reconsideration which states the basis for reconsideration. An applicant who fails to cure the deficiency or request reconsideration within 60 days of notification will be deemed to have withdrawn the application and such withdrawal shall not be subject to appeal or review. The Department will issue a written determination to an applicant in response to any request for reconsideration within 30 days of its receipt of the request.

2.04(6) Applications that are initiated in the Department's online system but not submitted will be closed and deemed withdrawn 14 days after initiation. Such closed and withdrawn applications shall not be subject to appeal or review.

2.04(7) The Department will promptly act upon complete applications. The Department may require additional information and documentation from an applicant to determine compliance with applicable laws and rules or to verify any information and documentation submitted.

3.00 Types of Licenses

3.01 Initial Teacher License

An initial teacher license is valid for three years from the date of issuance and may be renewed as provided in section 7.01 of these rules.

3.01(1) An initial teacher license may be issued to an applicant who:

3.01(1)(a) holds an earned bachelor's or higher degree from an accepted institution of higher education;

3.01(1)(b) has completed an approved program of preparation at an accepted institution of higher education, including the field-based experience required by section 23-1-121(2)(d), C.R.S.;

3.01(1)(c) has provided an institutional recommendation which meets the requirements outlined in 2.04(2)(b) and:

3.01(1)(c)(i) verifies satisfactory completion of the approved program;

3.01(1)(c)(ii) specifies the grade/developmental level(s) and endorsement area(s) or specialization(s) completed by the applicant;

3.01(1)(c)(iii) verifies successful completion of student teaching, internship or practicum as specified in 2.01(41) of these rules; the grade/developmental level(s) and endorsement/specialization areas of the experience; and

3.01(1)(c)(iv) certifies that the applicant has demonstrated thorough knowledge of the subject matter to be taught and has the competencies essential for educational service.

3.01(1)(d) has submitted a complete application for a license as defined in section 2.04 of these rules; and

3.01(1)(e) has demonstrated professional competencies and depth of content knowledge necessary for teaching in the endorsement area by:

3.01(1)(e)(i) passage of the approved content test(s);

3.01(1)(e)(ii) approval of a portfolio of coursework reviewed by the Department or its designee. This option is available for up to 1,000 applicants per fiscal year on a first-come, first-served basis, and CDE will publicly post on its website when the 1,000-applicant limit has been reached;

3.01(1)(e)(ii)(A) A portfolio of coursework will consist of coursework and teaching-based artifacts and evidence that demonstrate professional competencies and depth of content knowledge, including, but not limited to, live teaching videos, copies of lessons delivered by the applicant, syllabi and other curricular materials developed or used by the applicant, papers written by the applicant, demonstrated classroom experience in which a rubric review was utilized, and/or professional development assessment of content knowledge, etc.

3.01(1)(e)(ii)(B) Portfolio artifacts and evidence must be submitted with a content matter worksheet(s) for the endorsement sought and demonstrate competency in the endorsement area as defined by the endorsement area standards in 1 CCR 301-101.

3.01(1)(e)(ii)(C) Portfolio coursework artifacts and evidence of depth of content knowledge will be evaluated based on the degree to which they demonstrate competency in the endorsement area sought, as outlined below, and applicants will receive ratings of "met" or "not met" based on the alignment of the artifacts and evidence to the endorsement area standards in 1 CCR 301-101. Each applicable endorsement standard will be evaluated as follows:

3.01(1)(e)(ii)(C)(I) score 0 = No evidence provided or provided evidence does not align to the endorsement standard;

3.01(1)(e)(ii)(C)(II) score 1 = Evidence provided does not fully demonstrate attainment of the standard; and

3.01(1)(e)(ii)(C)(III) score 2 = Adequate evidence demonstrates attainment of the standard;

3.01(1)(e)(iii) submitting evidence of achieving coursework in the endorsement area sought, as defined by the department, with a minimum average grade of B-; or

3.01(1)(e)(iv) a combination of the measures outlined in 3.01(1)(e).

3.01(1)(e)(v) In addition to the options for demonstrating professional competencies and depth of content knowledge for initial teacher licensure outlined in rule 3.01(1)(e), secondary teachers may also demonstrate subject matter knowledge by:

3.01(1)(e)(v)(A) an earned bachelor's or higher degree from an accepted institution of higher education in the endorsement area; or

3.01(1)(e)(v)(B) 24 semester hours of qualifying coursework in the endorsement area sought, as defined by the department, with a minimum average grade of B- as demonstrated through transcript evaluation.

3.01(2) An initial teacher license may be issued to an applicant who has completed an alternative teacher program and who:

3.01(2)(a) holds an alternative teacher license as prescribed in section 3.12 of these rules or an interim authorization as prescribed in section 4.09 of these rules;

3.01(2)(b) has completed an alternative teacher program as defined in section 2.01(6) of these rules;

3.01(2)(c) has submitted a complete application for an initial license as defined in section 2.04 of these rules;

3.01(2)(d) has provided an institutional recommendation from the approved designated agency and which meets the requirements outlined in 2.04(2)(b), and:

3.01(2)(d)(i) verifies satisfactory completion of the alternative teacher program;

3.01(2)(d)(ii) verifies employment as an alternative teacher as provided in sections 22-60.5-201 and 22-60.5-205, C.R.S., in the endorsement area sought; and

3.01(2)(d)(iii) certifies that the applicant has demonstrated thorough knowledge of the subject matter to be taught and has demonstrated the competencies essential for educational service.

3.01(2)(e) has demonstrated subject matter knowledge necessary for teaching in the endorsement area as specified in 3.01(1)(e) of these rules.

3.02 Initial Special Services License

An initial special services license is valid for three years from the date of issuance and may be renewed as provided in section 7.01 of these rules. [The standards and competencies for each special services endorsement are set forth in state board of education rule, 1 CCR 301-101.](#)

3.02(1) An initial special services license may be issued to an applicant who:

3.02(1)(a) holds an earned bachelor's or higher degree from an accepted institution of higher education;

3.02(1)(b) has completed an approved special services preparation program at an accepted institution of higher education, or has alternatively met the requirements for preparation as identified by State Board of Education Rule;

3.02(1)(c) has supplied an institutional recommendation which meets the requirements outlined in 2.04(2)(b), and:

3.02(1)(c)(i) verifies satisfactory completion of the approved program;

3.02(1)(c)(ii) specifies the area(s) of endorsement/specialization completed by the applicant;

3.02(1)(c)(iii) verifies successful completion of student teaching, internship or practicum in a school setting or other appropriate setting in the endorsement/specialization area sought for licensure; and

3.02(1)(c)(iv) certifies that the applicant has demonstrated thorough knowledge of the special service area and has the competencies essential for educational service.

3.02(1)(d) has submitted a complete application for a license as defined in section 2.04 of these rules; and

3.02(1)(e) holds a valid license or certificate in the respective discipline, where applicable, and meets the requirements for the respective discipline as outlined in 1 CCR 301-101 Rules for the Administration of Educator License Endorsements.

3.03 Initial Principal License

An initial principal license is valid for three years from the date of issuance and may be renewed as provided in section 7.01 of these rules.

3.03(1) An initial principal license may be issued to an applicant who:

3.03(1)(a) holds an earned bachelor's or higher degree from an accepted institution of higher education;

3.03(1)(b) has completed an approved principal preparation program at an accepted institution of higher education, including the field-based experience required by section 23-1-121(2)(d), C.R.S., an individualized alternative principal program as defined in sections 22-60.5-305.5 and 22-60.5-111(14), C.R.S., an alternative principal program created by a designated agency and approved by the State Board of Education pursuant to section 22-60.5-305.5(6)(a), C.R.S., or has evidence of partial completion of an approved principal preparation program in each of two or more accepted institutions of higher education. Upon a finding by the Department of completion of the equivalent of any one program by combining work completed at different programs, the requested license may be issued, assuming all requirements set forth in these rules have been met;

3.03(1)(c) has provided an institutional recommendation from the principal preparation program, appropriate to the license sought and on the Department's program verification form, which at a minimum confirms:

3.03(1)(c)(i) the date of completion and verifies satisfactory completion of the approved program;

3.03(1)(c)(ii) specifies the area(s) of endorsement/specialization completed by the applicant;

3.03(1)(c)(iii) verifies successful completion of internship or practicum in a school setting or other appropriate setting in the endorsement/specialization area sought for licensure; and

3.03(1)(c)(iv) certifies that the applicant has demonstrated thorough knowledge of the Principal Quality Standards and has the competencies essential for educational service.

3.03(1)(d) provides documented evidence of three or more years of full-time, successful experience working with students as a licensed or certificated professional in a public or nonpublic elementary or secondary school in this state or another state or has three or more years of experience working with students as a professional in a nonpublic school;

3.03(1)(e) has submitted a complete application for an initial license as defined in section 2.04 of these rules; and

3.03(1)(f) has demonstrated professional competencies as evidenced by a passing score on the approved content test.

3.03(2) An initial principal license must be valid in any school district, BOCES, nonpublic or charter school which provides, participates in or has been granted a waiver from providing an approved induction program for principals as described in section 9.00 of these rules.

3.03(3) An initial principal license must be valid for occasional teaching, which must not constitute more than one-half of a typical teaching assignment.

3.04 Initial Administrator License

An initial administrator license is valid for three years from the date of issuance and may be renewed as provided in section 7.01 of these rules.

3.04(1) An initial administrator license may be issued to an applicant who:

3.04(1)(a) holds an earned bachelor's or higher degree from an accepted institution of higher education;

3.04(1)(b) has completed an approved program for district-level administrators at an accepted institution of higher education or has evidence of partial completion of an approved administrator preparation program in each of two or more accepted institutions of higher education. Upon a finding of completion by the Department of completion of the equivalent of any one program by combining work completed at different programs, the requested license may be issued, assuming all requirements set forth in these rules have been met;

3.04(1)(c) has supplied an institutional recommendation from the preparing administrator preparation program, appropriate to the license sought and on the Department's program verification form, which at a minimum confirms:

3.04(1)(c)(i) the date of completion and verifies satisfactory completion of the approved program;

3.04(1)(c)(ii) specifies the area(s) of endorsement/specialization completed by the applicant;

3.04(1)(c)(iii) verifies successful completion of internship, or practicum in a school setting or other appropriate setting in the endorsement/specialization area sought for licensure; and

3.04(1)(c)(iv) certifies that the applicant has demonstrated thorough knowledge of the Principal Quality Standards and has the competencies essential for educational service.

3.04(1)(d) has submitted a complete application for an initial license as defined in section 2.04 of these rules; and

3.04(1)(e) has demonstrated professional competencies as evidenced by a passing score on the approved content test for administrators.

3.04(2) An initial administrator license must be valid in any school district, BOCES, nonpublic school or charter school, which provides, participates in or has been granted a waiver from providing an approved induction program for administrators as described in section 9.00 of these rules.

3.04(3) A holder of an initial administrator license who has completed three or more years of full-time, continuous, successful experience working with students as a licensed professional in a public or nonpublic elementary or secondary school in this state or another state may function as an occasional teacher. For purposes of this section, occasional teaching is defined as no more than one-half of a typical teaching assignment.

3.04(4) The applicant for an initial administrator license with a director of gifted education endorsement must:

3.04(4)(a) hold a master's or higher degree in gifted education from an accepted institution of higher education or demonstrate knowledge and application of standards for the specialist, as determined upon evaluation by the Department;

3.04(4)(b) have a minimum of two years' full-time experience working with students with exceptional academic and talent aptitude;

3.04(4)(c) have completed an approved program for the preparation of directors of gifted education, which must include a supervised field-based experience, as confirmed on the institutional recommendation from the preparing program;

3.04(4)(d) have demonstrated professional competencies as evidenced by a passing score on the approved content test for administrators; and

3.04(4)(e) meet the professional competencies outlined in section 6.4720-6.28.

3.04(5) The applicant for an initial administrator license with a director of special education endorsement must meet requirements as outlined in either pathway detailed in rule 3.04(5)(a) or 3.04(5)(b) below:

3.04(5)(a) holders of a bachelor's-master's or higher degree in special education from an accepted institution of higher education, or a department-issued special services professional license with endorsement as a speech-language pathologist or school psychologist must; or demonstrate knowledge and application of standards for the specialist, as determined upon evaluation by the Department;

3.04(5)(b)3.04(5)(a)(i) have a minimum of two years' full-time experience working with students with special needs;

3.04(5)(e)3.04(5)(a)(ii) have completed an approved program for the preparation of directors of special education, which must include a supervised field-based experience, as confirmed on the institutional recommendation from the preparing program;

3.04(5)(d)3.04(5)(a)(iii) have demonstrated professional competencies as evidenced by a passing score on the approved content test for administrators; and

3.04(5)(e)3.04(5)(a)(iv) meet the professional competencies outlined in section 6.0811-6.19.

3.04(5)(b) holders of a department-issued professional special services license with an endorsement as a school audiologist, counselor, nurse, occupational therapist, orientation and mobility specialist, physical therapist or social worker must;

Commented [C03]: Per stakeholder input, revisions reflect additional ways for individuals to meet requirements for Special Education Director.

3.04(5)(b)(i) have five years' full-time experience under the professional license in their specialty;

3.04(5)(b)(ii) have three years' full-time experience as a special education administrator (such as a special education coordinator), which included supervision and evaluation of special education teachers and special service providers;

3.04(5)(b)(iii) have verified experience, supervision and execution of responsibilities for the special education administration as required by the federal Individuals With Disabilities Education Act and Colorado Exceptional Children's Education Act, including;

3.04(5)(b)(iii)(A) special education program supervision and evaluation, funding requirements, budget development, implementation costs and accountability, including maintenance of effort;

3.04(5)(b)(iii)(B) assurance and implementation of Child Find;

3.04(5)(b)(iii)(C) knowledge and understanding of the criteria for special education eligibility categories and special education referral, evaluation, eligibility determination and re-evaluation processes;

3.04(5)(b)(iii)(D) general requirements for the provision of a free and appropriate education and obligations to students with disabilities in all education settings;

3.04(5)(b)(iii)(E) development, implementation and evaluation of Individualized Education Plans, including a strong depth of knowledge in curriculum and instruction as it pertains to the delivery of specially designed instruction as defined in the Individuals With Disabilities Education Act;

3.04(5)(b)(iii)(F) student discipline procedures and confidentiality, procedural safeguards and dispute resolution processes for parents and children;

3.04(5)(b)(iii)(G) the integration of general and special education, including curriculum, instructional strategies, assessments, individualized instruction in support of academic achievement for all students; and

3.04(5)(b)(iii)(H) knowledge and supervision of the birth-21 continuum of services offered by school, district or BOCES; and

3.04(5)(b)(iv) have completed an approved program for the preparation of directors of special education, which must include a supervised field-based experience, as confirmed on the institutional recommendation from the preparing program;

3.04(5)(b)(v) have a passing score on the approved content test for administrators; and

3.04(5)(b)(vi) meet the professional competencies outlined in section 6.11-6.19.

3.05 Professional Teacher or Special Services License

A professional teacher or special services license is valid for a period of seven years from the date of issuance and may be renewed as provided in section 7.02 of these rules.

3.05(1) A professional teacher or special services provider license may be issued to an applicant who:

3.05(1)(a) holds a Colorado initial teacher license or Colorado initial special services license;

3.05(1)(b) has successfully completed an approved teacher or special services provider induction program as prescribed in section 8.00 of these rules and/or has been recommended for the professional teacher or special services license by the district or BOCES providing such induction program; and

3.05(1)(c) has submitted a complete application for a professional teacher or special services license as defined in Rule 2.04.

3.05(2) Notwithstanding the provisions in 3.05(1)(b), the Department may issue a professional teacher license if the applicant meets the requirements for an initial teacher license and previously completed an induction program while teaching under an adjunct instructor authorization, an emergency authorization, an interim authorization, a temporary educator eligibility authorization or alternative teacher license. If the applicant is employed by a school district, charter school, the institute, nonpublic school or BOCES that has obtained a waiver of the induction program requirement, the applicant must demonstrate completion of any requirements specified in the school district's, charter school's, the institute's, nonpublic school's or BOCES's plan for support, assistance and training of an initially licensed educator.

3.05(3) Notwithstanding the provisions in 3.05(1)(b), the Department may issue a professional special services license if the applicant meets the requirements for an initial special services license and previously completed an induction program while serving under an emergency authorization or a temporary educator eligibility authorization. If the applicant is employed by a school district, charter school, the institute, nonpublic school or BOCES that has obtained a waiver of the induction program requirement, the applicant must demonstrate completion of any requirements specified in the school district's, charter school's, the institute's, nonpublic school's or BOCES's plan for support, assistance and training of an initially licensed educator.

3.05(4) Notwithstanding the provisions in 3.05(1), the Department may issue a professional teacher license to an applicant who holds a certificate of apprenticeship completion from an approved teacher degree apprenticeship program.

Commented [KT4]: Per 22-60.5-111(16)

3.05(5) An applicant for a professional teacher license who did not demonstrate professional competencies prior to obtaining an initial teacher license may demonstrate professional competencies and depth of content knowledge as provided in rule 3.01(1)(e).

3.06 Professional Principal License

A professional principal license is valid for a period of seven years from the date of issuance and may be renewed as provided in section 7.02 of these rules.

3.06(1) A professional principal license may be issued to an applicant who:

3.06(1)(a) holds:

3.06(1)(a)(i) an earned master's degree from an accepted institution of higher education and has successfully completed an approved principal preparation program at an accepted institution of higher education, an alternative principal program or an individualized alternative principal program; and

3.06(1)(a)(ii) an initial principal license;

3.06(1)(b) has successfully completed an approved principal induction program as described in section 9.00 of these rules;

3.06(1)(c) has been recommended for a professional license by the school district(s), BOCES, nonpublic school, charter school or the institute which provided the induction program.

3.06(1)(d) has submitted a complete application for a professional license as defined in Rule 2.04.

3.06(2) Notwithstanding the provisions in 3.06(1)(b), the Department may issue a professional principal license if the applicant meets the requirements for an initial principal license and completed an approved principal induction program while employed under an emergency authorization, interim authorization or principal authorization. The applicant need not complete an approved induction program as an initial principal license-holder if the applicant previously completed an induction program while employed under an emergency authorization, interim authorization, or a principal authorization or if the school district, BOCES, nonpublic school, charter school or the institute in which the applicant is employed has obtained waiver of the induction program requirement pursuant to section 22-60.5-114(2), C.R.S.

3.06(3) A professional principal license is valid for occasional teaching, which must not constitute more than one-half of a typical teaching assignment. A principal who has previously held a professional teacher license may be reissued that license upon application and completion of the renewal requirements as outlined in 7.02.

3.07 Professional Administrator License

A professional administrator license is valid for a period of seven years from the date of issuance and may be renewed as provided in section 7.02 of these rules.

3.07(1) A professional administrator license may be issued to an applicant who:

3.07(1)(a) holds:

3.07(1)(a)(i) an earned master's degree from an accepted institution of higher education and has completed an approved administrator program at an accepted institution of higher education; and

3.07(1)(a)(ii) a valid initial administrator license; and

3.07(1)(a)(ii)(A) completes an approved administrator induction program; and

3.07(1)(a)(ii)(B) has been recommended for professional licensure by the school district, charter school, the institute, nonpublic school or BOCES that provided such an induction program.

3.07(2) Notwithstanding the provisions of section 3.07(1)(a)(ii), the Department may issue a professional administrator license if an applicant meets the requirements for an initial administrator license and completed an approved administrator induction program while employed under an emergency authorization, interim authorization or a temporary educator eligibility authorization. The applicant need not complete an approved induction program as an initial license-holder if the applicant previously completed an induction program while employed under an emergency authorization, interim authorization, or a temporary educator eligibility authorization or if the school district, BOCES, nonpublic school, charter school or the institute in which the applicant is employed has obtained waiver of the induction program requirement pursuant to section 22-60.5-306(1)(b)(C), C.R.S.

3.07(3) A holder of professional administrator licenses who has completed three or more years of full-time, continuous, successful, evaluated experience working with students as a licensed or certificated professional in a public or nonpublic elementary or secondary school in this state or another state may function as an occasional teacher. For purposes of this section, occasional teaching is defined as no more than one-half of a typical teaching assignment.

3.08 Master Certificate - Teacher

A master certificate represents achievements and contributions over and above expectations in the Teacher Quality Standards outlined in section 5.0 of these rules. A master certificate is valid for the period of time for which the applicant's professional teacher license is valid and is renewable as provided in section 7.02(6) of these rules.

3.08(1) A master certificate may be issued to an applicant who holds a valid Colorado professional teacher license and who has demonstrated advanced teaching competencies or expertise through:

3.08(1)(a) the attainment of National Board for Professional Teaching Standards certification; or

3.08(1)(b) demonstrated excellence in the following standards:

3.08(1)(b)(i) Standard 1: The master teacher develops a personal leadership vision focused on the successful learning and development of each student.

3.08(1)(b)(i)(A) Element A: The master teacher develops a leadership mission that promotes whole-child success and the well-being of each student.

3.08(1)(b)(i)(B) Element B: The master teacher articulates, advocates for, and cultivates core values that promote student-centered education, high expectations, learner support, equity, inclusiveness, social justice, openness, caring, trust, and continuous improvement.

3.08(1)(b)(i)(C) Element C: The master teacher strategically develops, implements and evaluates actions to achieve one's personal leadership mission and vision.

3.08(1)(b)(i)(D) Element D: The master teacher anticipates, identifies and addresses barriers to achieving one's leadership vision and mission.

3.08(1)(b)(i)(E) Element E: The master teacher models one's leadership mission, vision and core values in all interactions with students, colleagues, parents and community members.

3.08(1)(b)(ii) Standard 2: The master teacher understands the principles of adult learning and knows how to develop a collaborative culture of collective responsibility in the school. The master teacher uses this knowledge to promote an environment of collegiality, trust and respect that focuses on continuous improvement in instruction and student learning.

3.08(1)(b)(ii)(A) Element A: The master teacher utilizes group processes to help colleagues (for the purposes of this section, including all members of the school community involved in the education of children) work collaboratively to solve problems, make decisions, manage conflict and promote meaningful change.

3.08(1)(b)(ii)(B) Element B: The master teacher models effective skills in listening, presenting ideas, leading discussions, clarifying, mediating and identifying the needs of self and others to advance shared goals and professional learning.

3.08(1)(b)(ii)(C) Element C: The master teacher facilitates the creation of trust among colleagues, development of collective wisdom, building ownership and action that supports collective efficacy and student learning.

3.08(1)(b)(ii)(D) Element D: The master teacher uses knowledge and understanding of different backgrounds, races, ethnicities, cultures, and languages to create an inclusive culture and promote effective interactions among colleagues.

3.08(1)(b)(iii) Standard 3: The master teacher understands how research creates new knowledge, informs policies and practices and improves teaching and learning. The master teacher

models and facilitates the use of systematic inquiry as a critical component of teachers' ongoing learning and development.

3.08(1)(b)(iii)(A) Element A: The master teacher assists colleagues in accessing and using research to select appropriate strategies to improve student learning.

3.08(1)(b)(iii)(B) Element B: The master teacher models and facilitates analysis of student learning data, collaborative interpretation of results and application of findings to improve teaching and learning.

3.08(1)(b)(iii)(C) Element C: The master teacher supports colleagues in collaborating with higher education institutions and other organizations engaged in researching critical education issues.

3.08(1)(b)(iii)(D) Element D: The master teacher teaches and supports colleagues to collect, analyze, and communicate data from their classrooms to improve teaching and learning.

3.08(1)(b)(iii)(E) Element E: The master teacher collaborates with colleagues to identify promising, innovative practices and conduct action research to determine effectiveness and expansion possibilities.

3.08(1)(b)(iv) Standard 4: The master teacher understands the evolving nature of teaching and learning, established and emerging technologies, and the school community. The master teacher uses this knowledge to promote, design and facilitate job-embedded professional learning aligned with school improvement goals.

3.08(1)(b)(iv)(A) Element A: The master teacher collaborates with colleagues and school administrators to plan professional learning that is team-based, job-embedded, sustained over time, aligned with content standards and linked to school/district improvement goals.

3.08(1)(b)(iv)(B) Element B: The master teacher uses information about adult learning to respond to the diverse learning needs of colleagues by identifying, promoting and facilitating varied and personalized professional learning.

3.08(1)(b)(iv)(C) Element C: The master teacher identifies and uses appropriate technologies to promote collaborative and personalized professional learning.

3.08(1)(b)(iv)(D) Element D: The master teacher works with colleagues to collect, analyze, and disseminate data related to the quality of professional learning and its effect on teaching and student learning.

3.08(1)(b)(iv)(E) Element E: The master teacher advocates for sufficient preparation, time, and support for colleagues to work in teams to engage in job-embedded professional learning.

3.08(1)(b)(iv)(F) Element F: The master teacher provides constructive feedback to colleagues to strengthen teaching practice and improve student learning.

3.08(1)(b)(iv)(G) Element G: The master teacher uses information about emerging education, economic, and social trends in planning and facilitating professional learning.

3.08(1)(b)(v) Standard 5: The master teacher demonstrates a deep understanding of the teaching and learning processes and uses this knowledge to advance the professional skills of colleagues by being a continuous learner and modeling reflective practice based on student results. The master

teacher works collaboratively with colleagues to ensure instructional practices are aligned to a shared vision, mission and goals.

3.08(1)(b)(v)(A) Element A: The master teacher models, facilitates and enhances the process for collection, analysis, and use of classroom-and school-based data to identify opportunities to improve curriculum, instruction, assessment, school organization and school culture.

3.08(1)(b)(v)(B) Element B: The master teacher engages in reflective dialogue with colleagues based on student learning and helps make connections to research-based effective practices.

3.08(1)(b)(v)(C) Element C: The master teacher serves as a team leader to harness the skills, expertise, and knowledge of colleagues to address curricular expectations and student learning needs.

3.08(1)(b)(v)(D) Element D: The master teacher uses knowledge of existing and emerging learning innovations to guide colleagues in helping students skillfully and appropriately navigate the universe of knowledge available on the Internet, use social media to promote collaborative learning and connect with people and resources around the globe.

3.08(1)(b)(v)(E) Element E: The master teacher supports instructional strategies that respect issues of diversity and equity in the classroom and that promote equitable outcomes for all students.

3.08(1)(b)(vi) Standard 6: The master teacher is knowledgeable about current research on classroom- and school-based data and the design and selection of appropriate formative and summative assessment methods. The master teacher shares this knowledge and collaborates with colleagues to use assessment and other data to make informed decisions that improve learning for all students and to inform school and district improvement strategies.

3.08(1)(b)(vi)(A) Element A: The master teacher increases the capacity of colleagues to identify and use multiple assessment tools aligned to state and local standards.

3.08(1)(b)(vi)(B) Element B: The master teacher collaborates with colleagues in assessment design, implementation, scoring and interpreting student data to improve educational practice and student learning.

3.08(1)(b)(vi)(C) Element C: The master teacher creates a climate of trust and critical reflection to engage colleagues in challenging conversations about student learning data that lead to solutions to identified issues.

3.08(1)(b)(vi)(D) Element D: The master teacher works with colleagues to use assessment and data findings at multiple levels to promote changes in instructional practices or organizational structures to improve student learning.

3.08(1)(b)(vi)(E) Element E: The master teacher collaborates with colleagues to design opportunities to collect, analyze, and use qualitative data to improve teaching and learning.

3.08(1)(b)(vi)(F) Element F: The master teacher collaborates with colleagues to lead students to evaluate their own data and set relevant goals.

3.08(1)(b)(vii) Standard 7: The master teacher understands that families, cultures, and communities have a significant impact on educational processes and student learning. The master teacher works with colleagues to promote ongoing systematic collaboration with families, community

members, business and community leaders and other stakeholders to improve the educational system and expand opportunities for student learning.

3.08(1)(b)(vii)(A) Element A: The master teacher uses knowledge and understanding of the different backgrounds, ethnicities, races, cultures and languages in the school community to promote effective interactions among colleagues, families and the larger community.

3.08(1)(b)(vii)(B) Element B: The master teacher models and teaches effective communication and collaboration skills with families and other stakeholders focused on attaining equitable achievement for students of all backgrounds and circumstances.

3.08(1)(b)(vii)(C) Element C: The master teacher facilitates colleagues' self-examination of their own biases and understandings of community culture and diversity and how they can develop an asset-oriented mindset along with culturally responsive strategies to enrich the educational experiences of students and achieve high levels of learning for all students.

3.08(1)(b)(vii)(D) Element D: The master teacher develops a shared understanding among colleagues of the diverse educational needs of families and the community.

3.08(1)(b)(vii)(E) Element E: The master teacher collaborates with families, communities, and colleagues to develop comprehensive strategies to address the diverse educational needs of families and the community.

3.08(1)(b)(viii) Standard 8: The master teacher understands how educational policy is made at the local, state, and national level, as well as the roles school leaders, boards of education, legislators and other stakeholders have in formulating those policies.

3.08(1)(b)(viii)(A) Element A: The master teacher shares information with colleagues within and/or beyond the district regarding how local, state and national trends and policies can impact classroom practices and expectations for student learning.

3.08(1)(b)(viii)(B) Element B: The master teacher works with colleagues to identify and use research to advocate for teaching and learning processes that meet the needs of all students.

3.08(1)(b)(viii)(C) Element C: The master teacher collaborates with colleagues to select appropriate opportunities to advocate for the rights and/or needs of students, to secure additional resources within the building or district that support student learning, and to communicate effectively with targeted audiences, such as parents and community members.

3.08(1)(b)(viii)(D) Element D: The master teacher advocates for access to professional resources, including financial support and human and other material resources, that allow colleagues to spend significant time learning about effective practices and developing a professional learning community focused on school improvement goals and student success.

3.08(1)(b)(viii)(E) Element E: The master teacher represents and advocates for the profession in contexts inside and outside of the classroom.

3.09 Master Certificate - Special Services

A master certificate represents achievements and contributions over and above expectations in the Special Services Provider Quality Standards outlined in section 5.0 of these rules. A master certificate is valid for the period of time for which the applicant's professional special services license is valid and is renewable as provided in section 7.02 of these rules.

3.09(1) A master certificate may be issued to an applicant who:

3.09(1)(a) holds a valid Colorado professional special services license and is employed in a school in the area of specialization;

3.09(1)(b) has been involved in ongoing professional development and training;

3.09(1)(c) has demonstrated advanced competencies or expertise as identified by the educator evaluation system employed in the district;

3.09(1)(d) has been recognized for outstanding achievements in the field of specialization; and

3.09(1)(e) meets the following requirements for the area(s) of specialization:

3.09(1)(e)(i) School Audiologist:

3.09(1)(e)(i)(A) holds national certification in audiology;

3.09(1)(e)(i)(B) has completed at least five years of full-time, continuous, successful, evaluated experience as a school audiologist;

3.09(1)(e)(i)(C) has completed graduate-level university training in school audiology and related areas;

3.09(1)(e)(i)(D) has been involved in at least four of the following areas: local, state or national professional organizations; mentoring or supervision of peers; publication; professional presentations; funded grants; professional leadership; community activities and organizations; and

3.09(1)(e)(i)(E) has been granted an exemplary performance evaluation by a team of peers.

3.09(1)(e)(ii) School Counselor:

3.09(1)(e)(ii)(A) has held a Colorado professional special services license in school counseling for a minimum of five years;

3.09(1)(e)(ii)(B) has demonstrated professional growth through continuing education, professional leadership experiences and exceptional program development;

3.09(1)(e)(ii)(C) has demonstrated commitment to the school counseling profession through professional organization involvement, supervision and training of other school counselors, publication of professional materials and presentations at professional conferences; and

3.09(1)(e)(ii)(D) has demonstrated active community involvement, development of effective parent partnership programs and promotion of cooperation with other professional educators.

3.09(1)(e)(iii) School Occupational Therapist:

3.09(1)(e)(iii)(A) holds a master's degree in occupational therapy from an accepted institution of higher education;

3.09(1)(e)(iii)(B) holds an active occupational therapy license from the Colorado Department of Regulatory Agencies;

3.09 (1)(e)(iii)(C) has demonstrated outstanding contribution or accomplishments to the profession through at least three of the following: achieved certification or accreditation in an area of specialization of occupational therapy; supervised and mentored occupational therapy students; completed graduate-level professional coursework; completed research and/or publication in the area of school occupational therapy; made presentations at professional meetings; wrote grants; held or holds office in national, state or local professional organizations or boards;

3.09(1)(e)(iii)(D) has received recognition for outstanding achievements in occupational therapy; and

3.09(1)(e)(iii)(E) is involved in community programs.

3.09(1)(e)(iv) School Orientation and Mobility Specialist:

3.09(1)(e)(iv)(A) has demonstrated outstanding professional activities in at least three of the following areas: authored professional publications; juried articles, newsletters or books; made presentations at professional meetings or conferences; mentored other professionals and supervised student practicum experiences; taught at the university or school district in service levels; served as a model for demonstrations; provided active community leadership by promoting disability education and participation; or wrote grant proposals which were funded; and

3.09(1)(e)(iv)(B) has received recognition for demonstrated leadership in the field.

3.09(1)(e)(v) School Physical Therapist:

3.09(1)(e)(v)(A) holds a master's degree in physical therapy;

3.09(1)(e)(v)(B) holds an active professional physical therapy license from the Colorado Department of Regulatory Agencies;

3.09(1)(e)(v)(C) has demonstrated outstanding contributions or accomplishments to the profession through at least three of the following: achieved certification or accreditation in an area of specialization of physical therapy; supervised and mentored physical therapy students; completed graduate-level professional coursework; completed research and/or publication in the area of school physical therapy; presented at professional meetings; wrote grants; held or holds office in national, state or local professional organizations or boards;

3.09(1)(e)(v)(D) has received recognition for outstanding achievements in physical therapy; and

3.09 (1)(e)(v)(E) has been involved in community programs.

3.09(1)(e)(vi) School Nurse:

3.09(1)(e)(vi)(A) has completed additional preparation in advanced practice in nursing or specialties in school health-related fields or has earned additional certification in nursing administration, vocational education or other certifications applicable to school nursing;

3.09(1)(e)(vi)(B) has demonstrated professional leadership experiences and exceptional program development;

3.09(1)(e)(vi)(C) has mentored school nurses and supervised practicum students;

3.09(1)(e)(vi)(D) has had active participation in school nurse professional organizations; and

3.09(1)(e)(vi)(E) has participated in teaching, research and/or publishing to further the specialty of school nursing.

3.09(1)(e)(vii) School Psychologist:

3.09(1)(e)(vii)(A) has demonstrated commitment to the profession of school psychology through active involvement and leadership in local, state or national school psychology organizations;

3.09(1)(e)(vii)(B) has mentored school psychologists with an initial license and supervised school psychology interns;

3.09(1)(e)(vii)(C) has contributed to school and district program development;

3.09(1)(e)(vii)(D) has produced professional publications and presentations; and

3.09(1)(e)(vii)(E) has received recognition by peers for outstanding performance.

3.09(1)(e)(viii) School Social Worker:

3.09(1)(e)(viii)(A) has demonstrated leadership in state school social work organizations;

3.09(1)(e)(viii)(B) has actively participated in leadership roles in national social work organizations other community and human service organizations;

3.09(1)(e)(viii)(C) holds advanced credentials in the field (e.g., doctorate in social work, school social work specialist credential, diplomate in clinical social work);

3.09(1)(e)(viii)(D) has demonstrated outstanding skill in service to schools and children, such as the creation of innovative and successful programs and services to meet the needs of students and mentoring and supervising school social workers and other school professionals; and

3.09(1)(e)(viii)(E) has received recognition by peers for outstanding performance.

3.09(1)(e)(ix) Speech/Language Pathologist:

3.09(1)(e)(ix)(A) has demonstrated professional growth through professional leadership experiences and exceptional program development;

3.09(1)(e)(ix)(B) has demonstrated commitment through involvement in local, state or national professional organizations;

3.09(1)(e)(ix)(C) has accepted additional responsibilities at the school, district, state or national levels;

3.09(1)(e)(ix)(D) has published appropriate materials at the district, state or national levels;

3.09(1)(e)(ix)(E) has presented original research and materials at professional conferences;

3.09(1)(e)(ix)(F) has supervised practicum and internship students; and

3.09(1)(e)(ix)(G) has mentored and supervised other speech/language pathologists.

3.10 Master Certificate - Principal

A master certificate represents achievements and contributions over and above the expectations in the Principal Quality Standards outlined in section 6.0 of these rules. A master certificate is valid for the period of time for which the applicant's professional principal license is valid and is renewable as provided in section 7.02 of these rules.

3.10(1) A master certificate may be issued to an applicant who:

3.10(1)(a) holds a valid Colorado professional principal license;

3.10(1)(b) has displayed excellence and depth in all of the content and performance standards required for the professional principal license;

3.10(1)(c) displays depth in all content knowledge; has modeled sustained commitment to improved student performance, to ongoing systemic renewal and to strengthening the profession; and has demonstrated superior performance through accomplishments having significant impact on the school's educational community;

3.10(1)(c)(i) The master principal must possess knowledge in the following areas:

3.10(1)(c)(i)(A) systemic renewal strategies;

3.10(1)(c)(i)(B) multiple models for school and district management;

3.10(1)(c)(i)(C) dynamic political and policy movements in the state;

3.10(1)(c)(i)(D) promising practices in the professional development of educational leaders; and

3.10(1)(c)(i)(E) leading research and writing on instructional strategies, student learning, assessment methodology and supervisory techniques.

3.10(1)(c)(ii) The master principal must demonstrate the ability to:

3.10(1)(c)(ii)(A) create a community of learners who focus on student performance;

3.10(1)(c)(ii)(B) translate vision into program excellence;

3.10(1)(c)(ii)(C) provide value-added leadership to create an organization that has purpose, direction and energy;

3.10(1)(c)(ii)(D) implement programs in schools that result in sustained improvement in student performance;

3.10(1)(c)(ii)(E) integrate multiple instructional models to meet diverse learning needs of both students and adults to enhance student performance;

3.10(1)(c)(ii)(F) imagine alternatives based on knowledge of best practices and create those alternatives as a model for others;

3.10(1)(c)(ii)(G) engage a diverse school community in sustained efforts for school improvement;

3.10(1)(c)(ii)(H) influence and provide a model for larger systems (e.g., the district, BOCES or state);

3.10(1)(c)(ii)(I) contribute to the development of the profession through mentoring, teaching, writing and other modalities; and

3.10(1)(c)(ii)(J) capitalize on opportunities presented by diverse stakeholders.

3.10(1)(d) has demonstrated evidence of positive impacts on student performance at the building level; and

3.10(1)(e) has contributed to the education community through service as a mentor, teacher, writer, researcher or other service-oriented activity.

3.11 Master Certificate - Administrator

A master certificate represents achievements and contributions over and above expectations in the Administrator Quality Standards outlined in section 6.0 of these rules. A master certificate is valid for the period of time for which the applicant's professional administrator license is valid and is renewable as provided in section 7.02 of these rules.

3.11(1) A master certificate may be issued to an applicant who:

3.11(1)(a) holds a valid Colorado professional administrator license;

3.11(1)(b) has displayed excellence and depth in all of the content and performance standards required for the professional license;

3.11(1)(c) has demonstrated excellence on all performance standards and displays depth in all content knowledge; has modeled sustained commitment to improved student performance, to ongoing systemic renewal and to strengthening of profession; and has demonstrated superior performance through accomplishments having significant impact on an educational community;

3.11(1)(c)(i) The master administrator must possess knowledge in the following areas:

3.11(1)(c)(i)(A) systemic renewal strategies;

3.11(1)(c)(i)(B) multiple models for school and district management;

3.11(1)(c)(i)(C) dynamic political and policy movements in the state;

3.11(1)(c)(i)(D) promising practices in the professional development of educational leaders;

3.11(1)(c)(i)(E) leading research and writing on instructional strategies, student learning, assessment methodology and supervisory techniques; and

3.11(1)(c)(ii) The master administrator must demonstrate the ability to:

3.11(1)(c)(ii)(A) initiate and sustain significant change in the district directed toward predetermined goals, themes and needs;

3.11(1)(c)(ii)(B) create a community of learners who focus on student performance;

3.11(1)(c)(ii)(C) translate vision into program excellence;

3.11(1)(c)(ii)(D) provide value added leadership to create an organization that has shared purpose, direction and energy;

3.11(1)(c)(ii)(E) provide incentives, direction and motivation for development of programs that enhance student performance;

3.11(1)(c)(ii)(F) imagine alternatives based on knowledge of best practices and create those alternatives as a model for others;

3.11(1)(c)(ii)(G) engage a diverse community in sustained efforts for school improvement in the entire district;

3.11(1)(c)(ii)(H) influence and provide a model for the larger system (e.g., the district, BOCES or state);

3.11(1)(c)(ii)(I) contribute to the development of the profession through mentoring, teaching, writing and other modalities; and

3.11(1)(c)(ii)(J) capitalize on opportunities presented by diverse stakeholders.

3.11(1)(d) has demonstrated evidence of positive impacts on student performance throughout the district; and

3.11(1)(e) has contributed to the education community through service as a mentor, teacher, writer, researcher or other service-oriented activity.

3.12 Alternative Teacher License

An alternative teacher license is valid for either a one-, two- or three-year period, as outlined below. An alternative teacher license authorizes the holder to be employed only as an alternative teacher while participating in an alternative teacher program, pursuant to the terms of an alternative teacher contract, as provided by 22-60.5-201(1)(a), C.R.S.

3.12(1) An alternative teacher license may be issued to an applicant who meets the following criteria:

3.12(1)(a) holds a bachelor's degree from an accepted institution of higher education;

3.12(1)(b) has submitted a complete application as defined in section 2.04 of these rules;

3.12(1)(c) has demonstrated to the state board, in a manner prescribed by rule 3.01(1)(e), subject matter knowledge in the endorsement area; and

3.12(1)(d) provides a statement of assurance signed by the human resources officer or other representative of the designated agency and the applicant verifying that the applicant is enrolled in an approved alternative teacher program, employed as a teacher or participating in a clinical experience, and that the placement is in the endorsement area for which the teacher has demonstrated appropriate subject matter knowledge.

3.12(2) An alternative teacher license is valid as follows:

3.12(2)(a) The alternative teacher license for a one-year program is valid for one year from date of issuance and may be renewed for one additional year, but only upon written evidence of: (1) unforeseen circumstances; and (2) that the employing school district, BOCES, charter school or nonpublic school anticipates extending the alternative teacher's contract for one additional year pursuant to section 22-60.5-207(2), C.R.S.

3.12(2)(b) The alternative teacher license for a two-year program is valid for two years from date of issuance.

3.12(2)(c) A person may be employed as an alternative teacher for a total of three years for the purpose of receiving a special education generalist endorsement.

3.12(3) An alternative teacher license is valid in any school district, BOCES, nonpublic school or charter school.

3.13 Teacher of Record License and Program

3.13(1) **Teacher of Record License.** A teacher of record license is valid for two years from the date of issuance and may be renewed once, but only if the holder did not complete a bachelor's degree due to unforeseen circumstances or hardship.

3.13(1)(a) A teacher of record license may be issued to an applicant who:

3.13(1)(a)(i) is enrolled in an accepted institution of higher education and has no more than 36 credit hours remaining for completion of a bachelor's degree that leads to a teacher license, but has not yet completed field-based experience requirements;

3.13(1)(a)(ii) is enrolled in a one- or two-year Teacher of Record Program pursuant to section 22-60.5-208.7, C.R.S.; and

3.13(1)(a)(iii) is or will be employed by an LEP, in a position for which no other qualified licensed teacher has applied, and for which the LEP has determined that there is a critical teacher shortage as defined in Rule 2.01(17).

3.13(1)(b) The standards and competencies for an individual working under a teacher of record license are those set forth in section 5.0 of these rules.

3.13(1)(c) A teacher of record license may not be issued with an endorsement in special education.

3.13(2) **Teacher of Record Program.** An LEP is authorized to implement a one- or two-year teacher of record program and may employ a teacher of record only when the individual will fill a vacant position in a critical teacher shortage area and when no other qualified, licensed applicants applied for the posted vacant position.

3.13(2)(a) A teacher candidate employed in a teacher of record program established pursuant to this section shall hold a teacher of record license issued pursuant to section 22-60.5-201(1)(a.5), C.R.S., and section 3.13 of these rules.

3.13(2)(b) To assist the teacher of record in meeting the Teacher Quality Standards, established pursuant to section 22-2-109(3), C.R.S., and section 5.0 of these rules, the teacher of record program must include, at a minimum:

3.13(2)(b)(i) Course requirements and provided supports:

3.13(2)(b)(i)(A) identification of the courses and number of credit hours that a teacher candidate must complete before and while a teacher of record,

3.13(2)(b)(i)(B) identification of the time and support (e.g., financial resources, class coverage) the LEP will provide for the teacher of record to complete the coursework;

3.13(2)(b)(i)(C) identification of accepted institution of higher education supports, including a description of how supports will be delivered (e.g., mentoring, professional development, evaluation and LEP-identified supports); and

3.13(2)(b)(ii) professional development, teacher mentorship, the LEP's induction program and other supports for the teacher of record over the course of the program.

3.13(2)(c) If the teacher of record successfully completes an induction program, the teacher of record may apply completion of the induction program toward meeting the requirements for a professional teacher license.

3.13(2)(d) An LEP shall treat a teacher of record as a first-year teacher for purposes of compensation and placement on a teacher salary schedule.

3.13(2)(e) The teacher of record program must be approved by the Department prior to submission of an application for the teacher of record license. At a minimum, the approval process will include review of:

3.13(2)(e)(i) the demonstration of need;

3.13(2)(e)(ii) proposed program details as outlined in section 3.13(2) of these rules;

3.13(2)(e)(iii) the teacher candidate's education, experience and demonstration of content-area competency via an approved content test; and

3.13(2)(e)(iv) assurances from the institution of higher education, LEP and teacher of record candidate.

4.00 Types of Authorizations

The Department is authorized to issue the following authorizations.

4.01 Adjunct Instructor Authorization (Grades K-12)

To address recruiting challenges and establish a diverse workforce, a school district, BOCES or charter school may employ as an adjunct instructor a specialist or content-area expert who is without formal

educator training. The purpose of adjunct instruction is to provide students with highly specialized academic enrichment in support of required content areas.

4.01(1) An adjunct instructor authorization is issued for three years to an applicant who meets the following criteria:

4.01(1)(a) an applicant possesses outstanding talent or demonstrates specific abilities and knowledge in a particular area of specialization;

4.01(1)(b) a school district board of education or superintendent or the principal of a charter school or BOCES requests the applicant's services and provides evidence of the applicant's outstanding talent or specific abilities and particular knowledge for the assignment;

4.01(1)(c) the school district, BOCES, or charter school provides evidence that the applicant's services are required; and

4.01(1)(d) the applicant has been employed for at least five years in the area of specialization or holds an earned bachelor's or higher degree in the area of specialization.

4.01(2) An adjunct instructor authorization may be renewed for succeeding three-year periods at the employing school district's or charter school's request when the school district or charter school provides documented evidence of ongoing need for the adjunct instructor's services.

4.01(3) A person may be employed under an adjunct instructor authorization only by the school district or charter school that requested the person's services.

4.01(4) A person who holds an adjunct instructor authorization and is employed by a school district may teach only under the general supervision of a licensed professional teacher. For the purposes of this provision, "general supervision" means support, mentorship and supervision of an adjunct instructor, and does not require more than one teacher in a classroom at a time.

4.01(4)(a) A school district or charter school shall not employ a person under an adjunct instructor authorization as a full-time teacher; except

4.01(4)(a)(i) a rural school district may employ an adjunct instructor authorization-holder as a full-time teacher if there are no qualified, licensed applicants for the position.

4.02 Special Services Intern Authorization (Birth-21)

A special services intern works under the supervision of a Colorado licensed professional special services provider from the same discipline.

4.02(1) The special services intern authorization may be issued for one academic year. It may only be renewed if the special services intern is employed by a district or BOCES and the intern has not completed the approved program of preparation due to unforeseen circumstances or hardship.

4.02(2) The applicant must hold a bachelor's or higher degree from an accepted institution of higher education and be enrolled in an approved program of preparation for special services providers. The program of preparation must require an internship and offered by an accepted institution of higher education.

4.02(3) For the period of time while the authorization-holder serves as an intern, the authorization-holder may receive pay from the school district.

4.03 Emergency Authorization (Grades K-12)

The applicant for an emergency authorization has not yet met the requirements for a Colorado initial teacher, principal, administrator or special services provider license or a school speech/language pathology assistant authorization but provides evidence of holding an earned bachelor's degree or higher from an accepted institution of higher education and of enrollment in an approved program of preparation.

4.03(1) An applicant for a school speech-language pathology assistant emergency authorization must hold a bachelor's degree in speech, language and hearing sciences; communications disorders-speech sciences; or any other field with completion of 24 semester hours in speech, language hearing sciences from an accepted institution of higher education, as determined by the Department's transcript review.

4.03(2) The emergency authorization may be issued for up to one year and may be renewed for up to one additional year when:

4.03(2)(a) a school district or BOCES requests the emergency authorization in order to employ a non-licensed teacher, principal, administrator or special services provider;

4.03(2)(b) the district provides evidence of a need for specific and essential educational services which can be provided by the applicant, and which would otherwise be unavailable, due to a shortage of licensed educators with appropriate endorsements; and

4.03(2)(c) in the judgment of the State Board of Education,

4.03(2)(c)(i) the employment of the non-licensed applicant is essential to the preservation of the district's instructional program, and

4.03(2)(c)(ii) that the establishment of an alternative teacher program by the local board of education is not a practicable solution to resolve the demonstrated shortage.

4.03(3) The district may provide an induction program for an individual on an emergency authorization, as specified in sections 8.00 and 9.00 of these rules. Induction programs completed while holding an emergency authorization may count toward fulfilling requirements for a professional license.

4.04 Career and Technical Education Authorization (Grades 7-12)

4.04(1) An initial career and technical education (CTE) authorization may be issued for three years and may not be renewed. The applicant must meet the minimum qualifications adopted by the State Board for Community Colleges and Occupational Education under section 23-60-304(3)(a), C.R.S.

4.04(2) A professional career and technical education authorization may be issued for five years to an applicant who holds an initial career and technical education authorization and who meets the necessary requirements for holding a professional-level CTE authorization. It may be renewed for succeeding five-year periods. The applicant must meet the minimum qualifications or renewal requirements that the State Board for Community Colleges and Occupational Education adopts pursuant to section 23-60-304(3)(a), C.R.S.

4.04(3) Postsecondary career and technical education credentials are issued by the Colorado Community College System and are governed by the rules for the Administration of the Colorado Vocational Act, 8 CCR 1504-2.

4.05 Substitute Authorization (Grades K-12)

A substitute authorization may be issued to an applicant to serve as a substitute educator.

4.05(1) A substitute authorization is valid for one, three or five years, as specified below. It may be renewed indefinitely upon application.

4.05(1)(a) A five-year substitute authorization may be issued when an applicant has completed an approved teacher preparation program (as indicated by a signed approved program verification form and conferred transcript) or holds or has held a Colorado initial or professional license or an equivalent out-of-state-issued license.

4.05(1)(b) A three-year substitute authorization may be issued to an applicant who holds an earned bachelor's or higher degree from an accepted institution of higher education.

4.05(1)(c) A one-year substitute authorization may be issued when:

4.05(1)(c)(i) the applicant holds a high school diploma or its equivalent, and

4.05(1)(c)(ii) the applicant attests to having worked successfully with children.

4.06-4.08 Reserved

4.09 Interim Authorization (Grades K-12; Ages Birth-21)

An interim authorization may be issued for one year and may be renewed upon application for one additional year to a person who is:

4.09(1) certified or licensed, or eligible for certification or licensure, as a teacher, principal or administrator in another state and who has not successfully demonstrated professional competencies and depth of content knowledge as outlined in 3.01(1)(e), 3.03 or 3.04 to obtain an initial license but who meets the other requirements for an initial license; or

4.09(2) enrolled in an alternative teacher program as defined in 2.01(6) of these rules and meets the requirements for an alternative teacher license, except that the person has not successfully demonstrated professional competencies and depth of content knowledge as outlined in 3.12(1)(c) to obtain an alternative teacher license.

4.09(3) A holder of an interim authorization must demonstrate professional competencies and depth of content knowledge as specified in 3.01(1)(e), 3.03 or 3.04 to obtain an initial license.

4.09(4) The employing school district may provide an induction program for holders of interim authorizations as specified in sections 8.00 and 9.00 of these rules. Induction programs completed while holding interim authorizations may count toward fulfilling the requirements of a professional license.

4.10 Military Spouse Interim Authorization (Grades K-12, Ages Birth-21)

A military spouse interim authorization is valid for one year, and the Department may renew the authorization for one additional year.

4.10(1) A military spouse interim authorization may be issued to a military spouse when:

4.10(1)(a) the applicant is a spouse of an active-duty member of the United States armed forces who has been transferred to Colorado, is scheduled to be transferred to Colorado, is domiciled in Colorado or has moved to Colorado on a permanent change-of-station basis;

4.10(1)(b) the applicant is certified, licensed or eligible for certification or licensure as a teacher special services provider, principal or administrator in another state; and

4.10(1)(c) the applicant has not successfully demonstrated professional competencies and depth of content knowledge as outlined in 3.01(1)(e), 3.02, 3.03 and 3.04 required for obtaining an initial license but otherwise meets the requirements for an initial license.

4.10(2) A holder of a military spouse interim authorization must demonstrate professional competencies and depth of content knowledge as specified in 3.01(1)(e), 3.02, 3.03 or 3.04 to obtain an initial license.

4.10(3) The employing school district may provide an induction program for holders of military spouse interim authorization as specified in sections 8.00 and 9.00 of these rules. Induction programs completed while holding this authorization may count toward fulfilling the requirements of a professional license.

4.11 School Speech-Language Pathology Assistant Authorization (Ages Birth–21).

A school speech-language pathology assistant (SLPA) serves as a member of an educational team and is authorized to perform tasks prescribed, directed and supervised by a licensed school speech-language pathologist (SLP) in implementing services for children/students with speech, language, cognitive, voice and augmentative/alternative communication disorders and hearing impairments.

4.11(1) An SLPA authorization is valid for five years and may be renewed for succeeding five-year periods upon application and completion of content-related renewal requirements, including 50 contact hours of continuing education.

4.11(1)(a) an applicant for SLPA authorization must: holds a bachelor's degree in speech communication, speech-language pathology, communication disorders-speech sciences or a bachelor's degree in any other field with completion of 24 semester hours in speech language hearing sciences from an accepted institution of higher education, as determined by the Department's transcript review;

4.11(1)(b) have successfully completed a speech-language pathology assistant program at a regionally or nationally accredited institution;

4.11(1)(c) have successfully completed a minimum 100 clock-hours of a school-based practicum under the supervision of an American Speech-Language-Hearing Association-certified and licensed school SLP, in accordance with the requirements of section 4.11(6) below; and

4.11(1)(d) have demonstrated through Department transcript review knowledge in the competencies specified in sections 4.11(3) and 4.11(4) below.

4.11(2) As determined by the Department of Higher Education, the SLPA applicant is knowledgeable about communication processes and basic human communication, and is able to articulate:

4.11(2)(a) the anatomical/physiological, psychological, developmental, linguistic and cultural bases of communication processes;

4.11(2)(b) communication disorders, articulation, fluency, voice and resonance, receptive and expressive language and language-based learning disabilities;

4.11(2)(c) hearing disorders and their impact on speech and language;

4.11(2)(d) cognitive and social aspects of communication disorders;

4.11(2)(e) communication modalities including oral, written, manual, augmentative and alternative communication techniques and assistive technologies;

4.11(2)(f) normal development of reading and writing in the context of the general education curriculum; and

4.11(2)(g) characteristics of exceptional students including categorical disabilities, learning differences and developmental deficits.

4.11(3) The SLPA is knowledgeable about service delivery and must be able to:

4.11(3)(a) use appropriate verbal and written language in interactions with children/students, teachers and related professionals;

4.11(3)(b) follow oral and written directions, including those in intervention plans:

4.11(3)(c) assist in the selection, preparation and presentation of instructional and other related materials;

4.11(3)(d) maintain accurate and concise documentation in a timely manner;

4.11(3)(e) implement documented intervention plans developed by the supervising speech-language pathologist;

4.11(3)(f) assist with clerical duties assigned by the supervising speech-language pathologist including, but not limited to, scheduling, safety/maintenance of supplies and equipment and record keeping;

4.11(3)(g) collect data for quality improvement including child/student performance data in classrooms or individual therapy settings;

4.11(3)(h) record children's/students' each student's status with regard to progress towards established objectives as stated in the intervention plans, and report information to the supervising SLP;

4.11(3)(i) use constructive feedback from the supervising SLP to adapt or modify interaction and/or intervention with children/students;

4.11(3)(j) provide consistent, discriminating and meaningful feedback and reinforcement to the children/students; and

4.11(3)(k) implement designated intervention goals/objectives in specified sequence; and

4.11(3)(l) provide services via telepractice to students as directed by the supervising SLP.

4.11(4) The SLPA is knowledgeable about screening and assessment, but may not perform standardized or non-standardized diagnostic tests, including, but not limited to, feeding evaluations or interpreting test results, and is able to:

4.11(4)(a) assist the SLP during assessment of students (e.g., setting up the testing environment, gathering and prepping material, taking notes as advised by the supervising SLP, etc.);

4.11(4)(b) assist with informal documentation as directed by the SLP;

4.11(4)(c) provide directly to the supervising SLP descriptive behavioral observations that contribute to screening/assessment results; and

4.11(4)(d) support the SLP in research projects, service training and public relations programs, including Child Find activities.

4.11(5) The SLPA is knowledgeable about ethical practice and maintaining appropriate relationships with children/students, families, teachers and related service professionals, and must be able to:

4.11(5)(a) demonstrate respect for and maintain the confidentiality of information pertaining to students and their families;

4.11(5)(b) behave in accordance with educational facility guidelines;

4.11(5)(c) articulate an awareness of student needs and respect for cultural values;

4.11(5)(d) direct student, family and educational professionals to the supervising SLP for information regarding testing, intervention and referral;

4.11(5)(e) request assistance from the supervising SLP, as needed;

4.11(5)(f) manage time effectively and productively; and

4.11(5)(g) recognize personal professional limitations and perform within boundaries of training and job responsibilities.

4.11(6) The SLPA may not counsel parents, but may:

4.11(6)(a) share objective information (e.g., accuracy in speech and language skills addressed, participation in treatment, response to treatment) regarding student performance to students, families, teachers and other service providers without interpretation or recommendations as directed by the supervising SLP; and

4.11(6)(b) provide culturally responsive services while communicating and collaborating with students, families, teachers other service providers and the supervising SLP.

4.12 Exchange Educator Interim Authorization (Grades K-12, Ages Birth-21)

An exchange educator interim authorization may be issued to a participant in a district-recognized educator exchange program who has not completely fulfilled Colorado educator licensure requirements.

4.12(1) An exchange educator interim authorization is valid for one year and may be renewed upon application for one additional year.

4.12(2) Applicants must:

4.12(2)(a) be a participant in a district-recognized educator exchange program; and

4.12(2)(b) be certified, licensed or eligible for certification or licensure as a teacher, special services provider, principal or administrator in another country.

4.13 Temporary Educator Eligibility Authorization (Grades K-12, Ages Birth-8, 5-21, Birth-21)

The Department may issue a temporary educator eligibility (TEE) authorization to a person who is enrolled in an approved program of preparation for a special education educator or who is working to attain a special services provider initial license but who has not yet met the requirements for the applicable initial educator license or endorsement sought.

4.13(1) A TEE authorization is valid for one year. Renewal is contingent upon the applicant maintaining continuous progress toward completion of requirements for the license or endorsement sought. A TEE authorization may be renewed twice, for a total of three years.

4.13(2) A TEE authorization may be issued to an applicant when:

4.13(2)(a) a school district requests the TEE authorization in order to employ as a special education teacher, special services provider or special education administrator an applicant who does not yet meet licensing requirements but who meets the eligibility requirements specified below; and

4.13(2)(b) the district provides evidence of a demonstrated need for specific and essential educational services that can be provided by the applicant but that would be otherwise unavailable to students due to a shortage of licensed educators with appropriate endorsement(s).

4.13(3) TEE applicants must:

4.13(3)(a) hold a bachelor's degree from an accepted institution of higher education; and

4.13(3)(b) be enrolled in an approved or alternative special education, special education director or special services provider preparation program offered by an accepted institution of higher education; or

4.13(3)(c) for school counselor, hold a Department of Regulatory Authority (DORA) license in a counselor-related field and enrolled in prescribed school counselor endorsement coursework to meet requirements for Colorado's school counselor endorsement.

In the preparation program, the candidate must:

4.13(3)(c)(i) receive high-quality professional development that is sustained, intensive, and classroom-focused;

4.13(3)(c)(ii) participate in a program of intensive supervision that consists of structured guidance and regular ongoing support or a mentoring program specific to the license or endorsement sought; and

4.13(3)(c)(iii) demonstrate satisfactory progress toward full licensure (e.g., transcripts demonstrating movement toward the completion of the educator preparation or degree program; documentation verifying attempts to pass the required content exam(s) or documentation of attempts to demonstrate professional competencies and depth of content knowledge through other options under rule 3.01(1)(e) or 3.02).

4.13(3)(d) If an applicant has completed the required program or coursework for licensure or the endorsement sought, the applicant may continue working under a TEE as long as they can provide documentation showing initiation of steps towards demonstrating professional competencies and depth of content knowledge as provided by rule 3.01(1)(e) or 3.02.

4.13(4) In addition to the criteria in 4.13(3), CDE may issue a TEE to an SSP who has met the minimum degree requirements necessary to practice in their area of specialization, but who has not completed the necessary content assessment or school practicum in the area of specialization. A district may employ a person who holds a TEE pursuant to this Rule 4.13(4) only if the person is under the supervision of a professionally licensed person in the same area of specialization.

4.13(5) The employing school district may provide an induction program for an individual on a TEE authorization as specified in sections 8.00 and 9.00 of these rules. Induction programs completed while holding this authorization may count toward fulfilling the requirements of a professional license.

4.14 Educational Interpreter Authorization (Ages Birth-21)

The educational interpreter authorization allows a school district to employ a person to provide teaching and interpreting services for students who are deaf or hard of hearing.

4.14(1) An educational interpreter authorization is valid for five years and may be renewed for succeeding five-year periods upon application and submission of evidence of completion of four (4) semester hours of professional development or its equivalent of 60 contact/clock-hours in educational interpreter content.

4.14(2) The applicant must provide evidence of:

4.14(2)(a) an associate's or higher degree in educational interpreting or a related field;

4.14(2)(b) a certificate of completion for the Educational Interpreter Performance Assessment (EIPA) written exam;

4.14(2)(c) successful performance on one or more of the following professional skill assessments:

4.14(2)(c)(i) for sign language interpreters, a score of 3.5 or higher on the EIPA or current certification with the Registry of Interpreters for the Deaf (RID);

4.14(2)(c)(ii) for cued speech transliterators, a score of 4.0 or higher on the EIPA-Cued Speech exam or a passing score on the Cued Language Transliterator National Certification Exam; or

4.14(2)(c)(iii) for oral interpreters, a current Oral Transliteration Certificate from RID.

4.14(2)(d) demonstration of the following competencies:

4.14(2)(d)(i) effectively analyze communication for the speaker's style, affect, register and overall prosodic and coherence markers;

4.14(2)(d)(ii) effectively manage the interpreting process in order to produce a linguistically appropriate representation of classroom communication, as based on student ability and the individualized education plan (IEP) goals;

4.14(2)(d)(iii) manage the process for effectively switching from one speaker and mode to another;

4.14(2)(d)(iv) utilize attending and interrupting techniques effectively, based on culturally appropriate methods and classroom protocol; and

4.14(2)(d)(v) effectively apply knowledge of:

4.14(2)(d)(v)(A) cognitive processes associated with consecutive and simultaneous interpreting and the implication of each for interpreting classroom discourse;

4.14(2)(d)(v)(B) the differences between classroom discourse and conversational discourse, and the implication of those differences in the interpreting process;

4.14(2)(d)(v)(C) communication processes with inclusive students who are deaf or hard-of-hearing as related, but not limited to, issues of taking turns, avoiding overlap of speaking/signing processes, challenges associated with the use of multimedia and uncaptioned materials; and

4.14(2)(d)(v)(D) classroom subject matter concepts and associated vocabulary and terminology.

4.14(3) Applicants who have yet to take the EIPA performance exam or who are awaiting receipt of their EIPA performance exam results may:

4.14(3)(a) qualify for the authorization by providing evidence of:

4.14(3)(a)(i) an associate's or higher degree in educational interpreting or a related field;

4.14(3)(a)(ii) a certificate of completion verifying a passing score on the Educational Interpreter Performance Assessment (EIPA) written exam;

4.14(3)(a)(iii) successful performance on the CDE-approved Pre-Hire Screening; and

4.14(3)(a)(iv) verification of enrollment in a CDE-approved mentor program.

4.14(3)(b) Within 12 months of the date of application for the authorization, the applicant must submit evidence to CDE of successful performance on one or more of the following professional skill assessments:

4.14(3)(b)(i) for sign language interpreters, a score of 3.5 or higher on the EIPA or current certification with the Registry of Interpreters for the Deaf (RID);

4.14(3)(b)(ii) for cued speech transliterators, a score of 4.0 or higher on the EIPA-Cued Speech exam or a passing score on the Cued Language Transliterator National Certification Exam; or

4.14(3)(b)(iii) for oral interpreters, a current Oral Transliteration Certificate from RID.

4.14(4) Failure to fulfill the requirement outlined in 4.14.(3)(b) of these rules and provide proof of completion to CDE within twelve months of applying for the authorization will render the applicant ineligible for the authorization on the basis that the application is incomplete. CDE will notify the applicant that their application has been deemed incomplete, as provided by Rule 2.04(5). The applicant may cure the deficiency or request reconsideration. An applicant who fails to cure the deficiency or request reconsideration within 60 days of notification will be deemed to have withdrawn the application and such withdrawal shall not be subject to appeal or review. CDE will issue a written determination to an applicant in response to any request for reconsideration within 30 days of its receipt of the request.

4.15 Junior Reserve Officer Training Corps (JROTC) Instructor Authorization (Grades 9-12)

A JROTC instructor authorization may be issued to allow a person to instruct a JROTC unit hosted by a school district.

4.15(1) The JROTC Instructor Authorization is valid for five years and may be renewed upon application and submittal of evidence of service-specific JROTC recertification.

4.15(2) Applicants must provide documented evidence of JROTC certification based upon successful acquisition of service-specific JROTC program director certification or completion of service-specific JROTC preparation program requirements.

4.16 Adult Basic Education Authorization

An adult basic education authorization allows a person to work as an adult basic education instructor in an adult education program operated by a school district before, during, or after regular school hours.

4.16(1) An adult basic education authorization is valid for five years and may be renewed for succeeding five-year periods upon application. To be eligible for renewal, the application must submit evidence of completion of 90 contact hours of adult education instructor professional development activities completed within the period of time for which the authorization was issued.

4.16(2) An adult basic education authorization may be issued to an applicant who:

4.16(2)(a) holds an associate's or higher degree from an accepted institution of higher education or accredited community, technical, or junior college; and

4.16(2)(b) has submitted an application for an adult basic education authorization, which includes:

4.16(2)(b)(i) a copy of an official degree-conferred transcript; and

4.16(2)(b)(ii) evidence of the completion of adult basic education coursework aligned with federal Workforce Innovation & Opportunity Act guidelines, College and Career Readiness Standards for Adult Education and English Language Proficiency Standards for Adult Education, including:

4.16(2)(b)(ii)(A) a copy of an official transcript from an accepted institution of higher education or accredited community, technical or junior college showing the completion of adult basic education coursework within the seven years immediately preceding the date of application. Coursework must include: evidence-based reading instruction; programmatic accessibility; state-standardized assessment and instructional strategies that effectively prepare and support adult learners through transition pathways to college and/or career; teaching adult basic education/adult secondary education; and teaching English as a second language (ESL) to adults; or

4.16(2)(b)(ii)(B) evidence of completion of other adult basic education coursework in lieu of an official transcript showing completion of courses specified in section 4.16(1)(b)(ii)(A). The applicant must submit the Department's equivalency form and copies of official transcripts from an accepted institution of higher education or accredited community, technical or junior college showing coursework completed within the seven years immediately preceding the date of application. The Department will determine whether the coursework is equivalent to that listed in section 4.16(1)(b)(ii)(A).

4.16(3) Applicants who have not met the requirements as specified in section 4.16(2)(b)(ii) may submit evidence of experience, including:

4.16(3)(a) documentation illustrating 750 hours of performance of adult basic education instruction, adult secondary education instruction or ESL instruction to adults; and

4.16(3)(b) the Department's observation form, which includes observations of the applicant's instruction and competencies in adult basic education. The observation form must be completed by a qualified observer as determined by the Department.

4.17 Principal Authorization (Grades K-12)

A principal authorization may be issued to a person who does not hold or may not qualify for an initial principal license but who holds a bachelor's or higher degree from an accepted institution of higher

education and who will be employed by a district, charter school, or nonpublic school under an individualized alternative principal program or who participates in an alternative principal program through a designated agency. A school district may employ a person who holds a principal authorization to perform principal or assistant principal duties only when the authorization-holder is supervised by a professional principal license-holder.

4.17(1) A principal authorization is valid for three years and may not be renewed.

4.17(2) To submit a principal authorization application for an individualized alternative principal program, an applicant, in collaboration with a school district, charter school, nonpublic school or the institute, must submit to the Department documentation pursuant to section 13.01 of these rules.

4.17(3) To submit a principal authorization application for a person participating in an alternative principal program through a designated agency, the applicant must provide documentation of employment as an alternative principal or assistant principal and enrollment in an alternative principal program approved by the Colorado Department of Education pursuant to section 13.02 of these rules.

4.17(4) Upon successful completion of an individualized alternative principal program or alternative principal program, if the principal authorization-holder has three or more years of licensed experience in a school, that person may apply for an initial principal license.

4.17(5) The employer may provide an induction program for an individual working under a principal authorization as specified in section 9.00 of these rules. Induction programs completed while holding this authorization may count toward fulfilling requirements for a professional license.

4.18 Native American Language & Culture Instructor Authorization (Grades K-12)

A Native American language and culture instructor authorization may be issued to a person to provide instruction in the Native American language and culture in which the person has demonstrated expertise.

4.18(1) The Native American language and culture instructor authorization is valid for five years. It may be renewed for succeeding five-year periods upon application and at the request of the school district. The district must submit evidence of continuing need.

4.18(2) To receive a Native American language and culture instructor authorization, the applicant must:

4.18(2)(a) qualify for an adjunct instructor authorization as specified in section 4.01 of these rules;

or

4.18(2)(b) demonstrate expertise in a Native American language of a federally recognized tribe by:

4.18(2)(b)(i) providing evidence of demonstrated expertise in a Native American language of a federally recognized tribe, as verified by the employing school district;

4.18(2)(b)(ii) identifying a partnering, licensed teacher, as verified by the employing school district; and

4.18(2)(b)(iii) meeting the following objective standards, as verified by the employing school district:

4.18(2)(b)(iii)(A) is able to listen, speak, read and write the Native American language identified at a proficient level for the purposes of interpersonal, interpretive and presentational communication;

4.18(2)(b)(iii)(B) is knowledgeable about the language and related culture, can describe their interrelationships, and is able to articulate to students, other educators and interested stakeholders:

4.18(2)(b)(iii)(B)(I) perspectives related to historic and contemporary ideas, attitudes and values of the Native American culture;

4.18(2)(b)(iii)(B)(II) the practices within the Native American culture that are based on historical, geographical and sociological influences;

4.18(2)(b)(iii)(B)(III) the contributions and achievements of the culture to the fields of literature, the arts, science, mathematics, business, technology and other areas; and

4.18(2)(b)(iii)(B)(IV) the geographic, economic, social and political features of traditional and contemporary cultures associated with the Native American language being taught;

4.18(2)(b)(iii)(C) and is able to create a learning environment that accepts, encourages and promotes the culture and language that Native American language speakers bring into the classroom.

4.18(3) A holder of a Native American language and culture instruction authorization is prohibited from teaching any subject other than the Native American language for which he or she has demonstrated expertise.

4.19 Teacher Apprenticeship Authorization

Commented [KT5]: Per 22-60.5-111(16)

The department may issue a teacher apprenticeship authorization to a teacher apprentice who is enrolled in a state-approved teacher degree apprenticeship program that allows the teacher apprentice to be employed by a local education provider in roles of increasing responsibility, as specified in section 22-60.5-111(16), C.R.S.

4.19(1) To receive a teacher apprenticeship authorization, a person must:

4.19(1)(a) be employed by a school district, BOCES, charter school, or institute charter school as a teacher apprentice;

4.19(1)(b) be actively registered in a teacher apprenticeship program; and

4.19(1)(c) be actively enrolled in an affiliated bachelor's degree program from an accredited institution.

4.19(2) While under the teacher apprenticeship authorization, the following qualification and competencies must be demonstrated through the following allowable roles for a teacher apprentice and aligned to the Teacher Quality Standards (1 CCR 301-37 5.1-5.4):

4.19(2)(a) Level 1: Pre-Apprentice does not require the teacher apprenticeship authorization but may allow for substitute teaching if applicant meets substitute teaching authorization requirements as outlined in section 4.5 of these rules.

4.19(2)(b) Level 2: Beginner Apprentice requires each apprentice either hold a Colorado substitute authorization, obtain Colorado student teaching criminal history record check as outlined in CRS 22-2-119.3, or obtain the teacher apprenticeship authorization.

4.19(2)(b)(i) Allowable activities include substitute teaching, student teaching, and/or participation in a residency model.

4.19(2)(b)(ii) This level requires demonstration of competency in Teacher Quality Standard 2 as determined by the state-approved Teacher Degree Apprenticeship Program.

4.19(2)(c) Level 3: Intermediate Apprentice continues Level 2 authorization requirements and allowable student teaching activities and/or participation in a residency model.

4.19(2)(c)(i) This level may include starting the required one-year minimum of teacher apprentice working as the teacher of record as required in 22-60.5-111.5(1)(d).

4.19(2)(c)(ii) This level requires demonstration of competency in Teacher Quality Standard 1 and in Teacher Quality Standard 3 as determined by the state-approved Teacher Degree Apprenticeship Program.

4.19(2)(c)(iii) This level requires demonstration of content competency through passing score on the appropriate state board of education-approved content exam or portfolio equivalents as defined by endorsement area.

4.19(2)(d) Level 4: Trained Apprentice will culminate in a minimum of one year as teacher of record as required in 22-60.5-111.5(1)(d) and completion of all Department competencies related to the Teacher Quality Standards, as determined by the state-approved Teacher Degree Apprenticeship Program.

4.19(3) A teacher apprenticeship authorization is valid for four years while the apprentice completes the bachelor's degree and on-the-job training requirements of the program.

4.19(4) The authorization may be renewed twice, for two-year periods, as necessary for the teacher apprentice to fulfill the apprenticeship requirements.

4.19(5) The authorization will be automatically revoked should the apprentice withdraw from the teacher apprenticeship program or from the affiliated bachelor's degree program. The teacher apprenticeship program sponsor may revoke the authorization if the teacher apprentice does not make satisfactory progress in the teacher apprenticeship program, as determined by the employer.

4.19(6) When a teacher apprentice withdraws from the teacher apprenticeship program or affiliated bachelor's degree program, the teacher apprenticeship program sponsor must notify CDE of the withdrawal.

5.00 Teacher and Special Services Licensure Standards

Teacher Quality Standards

In addition to a demonstrated understanding of the Colorado Academic Standards; the Colorado Reading To Ensure Academic Development Act (Colorado READ Act); strict data privacy and security practices; special education regulations as outlined in section 23-1-121(2)(c.7), C.R.S.; and professional practices to address multiple pathways for students to be postsecondary and workforce ready as outlined in sections 22-2-106, 22-2-136, 22-7-1003(15), and 22-32-109, C.R.S., the following serve as standards for authorization of programming and content for educator preparation programs and licensing of all teacher candidates in Colorado.

5.01 Quality Standard I: Teachers demonstrate mastery of and pedagogical expertise in the content they teach. The elementary teacher is an expert in literacy and mathematics and is

knowledgeable in all other content that he or she teaches (e.g., science, social studies, the arts, physical education or world languages). The secondary teacher has knowledge of literacy and mathematics and is an expert in the content area(s) in which the teacher is endorsed.

5.01(1) Element A: Teachers provide instruction that is aligned with the Colorado Academic Standards and their district's organized plan of instruction.

5.01(2) Element B: Teachers develop and implement lessons that connect to a variety of content areas/disciplines and emphasize literacy and mathematics.

5.01(3) Element C: Teachers demonstrate knowledge of the content, central concepts, inquiry, appropriate evidence-based instructional practices and specialized characteristics of the disciplines they teach.

5.02 Quality Standard II: Teachers establish a safe, inclusive and respectful learning environment for a diverse population of students.

5.02(1) Element A: Teachers foster a predictable learning environment characterized by acceptable student behavior and efficient use of time, in which each student has a positive, nurturing relationship with caring adults and peers.

5.02(2) Element B: Teachers demonstrate an awareness of, a commitment to and a respect for multiple aspects of diversity, while working toward common goals as a community of learners.

5.02(3) Element C: Teachers engage students as individuals, including those with diverse needs and interests, across a range of ability levels by adapting their teaching for the benefit of all students.

5.02(4) Element D: Teachers work collaboratively with the families and/or significant adults for the benefit of students.

5.03 Quality Standard III: Teachers plan and deliver effective instruction and create an environment that facilitates learning for their students.

5.03(1) Element A: Teachers demonstrate knowledge about the ways in which learning takes place, including the levels of intellectual, physical, social and emotional development of their students.

5.03(2) Element B: Teachers use formal and informal methods to assess student learning and provide feedback, and they use results to inform planning and instruction.

5.03(3) Element C: Teachers utilize appropriate, available technology to engage students in authentic learning experiences.

5.03(4) Element D: Teachers establish and communicate high expectations and support the development of critical-thinking and problem-solving skills.

5.03(5) Element E: Teachers provide students with opportunities to work in teams and develop leadership.

5.03(6) Element F: Teachers model and promote effective communication.

5.04 Quality Standard IV: Teachers demonstrate professionalism through ethical conduct, reflection, and leadership.

5.04(1) Element A: Teachers demonstrate high standards for professional conduct.

5.04(2) Element B: Teachers link professional growth to their professional goals.

5.04(3) Element C: Teachers respond to a complex, dynamic environment.

5.04(4) Element D: Teachers demonstrate leadership in their school, the community and the teaching profession.

Special Services Provider Quality Standards

The following must serve as standards for authorization of program content for educator preparation programs and licensing of all special services ~~provider~~-candidates. Colorado has identified nine categories of special services ~~providers~~ ~~providers~~ (see section 3.02 of these rules), referred to as “other licensed personnel” in law and State Board rules). 1 CCR 301-101 further outlines the quality standards and elements applicable to specific special services ~~provider groups~~ ~~provider-groups~~, including:

- School Audiologist
- School Occupational Therapist
- School Physical Therapist
- School Counselor
- School Nurse
- School Orientation and Mobility Specialist
- School Psychologist
- School Social Worker
- School Speech-Language Pathologist

5.05 Quality Standard I: Special services providers demonstrate mastery of and expertise in the domain for which they are responsible.

5.05(1) Element A: Special services providers provide services aligned with state and federal laws, local policies and procedures, Colorado Academic Standards, their district’s organized plans of instruction and the individual needs of their students.

5.05(2) Element B: Special services providers demonstrate knowledge of effective services that support learning.

5.05(3) Element C: Special services providers demonstrate knowledge of their professions and integrate evidence-based practices and research findings into their services.

5.06 Quality Standard II: Special services providers support or establish safe, inclusive and respectful learning environments for a diverse population of students.

5.06(1) Element A: Special services providers foster a safe and accessible learning environment characterized by acceptable student behavior and efficient use of time, in which each student has a positive, nurturing relationship with caring adults and peers.

5.06(2) Element B: Special services providers understand and respond to diversity within the home, school and community.

5.06(3) Element C: Special services providers engage students as individuals with diverse needs and interests, across a range of ability levels, by adapting services for the benefit of students.

5.06(4) Element D: Special services providers work collaboratively with the families and/or significant adults for the benefit of students.

5.07 Quality Standard III: Special services providers plan and deliver effective services in an environment that facilitates student learning.

5.07(1) Element A: Special services providers apply knowledge of the ways in which learning takes place, including the appropriate levels of intellectual, physical, social and emotional development of their students.

5.07(2) Element B: Special services providers utilize formal and informal assessments to inform service delivery.

5.07(3) Element C: Special services providers utilize appropriate, available technology to engage students in authentic learning experiences.

5.07(4) Element D: Special services providers establish and communicate high expectations and support the development of critical-thinking, problem-solving and self-advocacy skills.

5.07(5) Element E: Special services providers develop and implement services related to student needs, learning, and progress towards goals.

5.07(6) Element F: Special services providers model and promote effective communication.

5.08 Quality Standard IV: Special services providers demonstrate professionalism through ethical conduct, reflection, and leadership.

5.08(1) Element A: Special services providers demonstrate high standards for ethical and professional conduct.

5.08(2) Element B: Special services providers link professional growth to their professional goals.

5.08(3) Element C: Special services providers respond to a complex, dynamic environment.

5.08(4) Element D: Special services providers demonstrate leadership and advocacy in the school, the community and their profession.

English Language Learner Quality Standards for Teachers and Special Services Providers

In order to ensure that all Colorado educators are well-equipped and able to teach Colorado's diverse student population, all educator pre-service programs, including approved programs of preparation at institutions of higher education and designated agencies providing alternative teacher programs, must ensure the following standards are fully taught and practiced in their programs. The following standards equate to approximately six (6) semester hours or the equivalent of 90 clock-hours.

Note: The following standards are to supplement, not supplant, the culturally and linguistically diverse (CLD) endorsement. These standards can and should be aligned to the CLD endorsement standards as noted in 1 CCR 301-101 if the educator preparation entity is seeking to graduate students with dual endorsements in a content area and in CLD.

5.09 Quality Standard I: Educators are knowledgeable about CLD populations.

5.09(1) Element A: Educators are knowledgeable in and can apply the major theories, concepts and research related to culture, diversity and equity in order to support academic access and opportunity for CLD student populations.

5.09(2) Element B: Educators are knowledgeable in and can use progress monitoring, in conjunction with formative and summative assessments, to support student learning.

5.10 Quality Standard II: Educators should be knowledgeable in first and second language acquisition.

5.10(1) Element A: Educators understand and can implement strategies and select materials to aid in English language and content learning.

5.10(2) Element B: Educators are knowledgeable in and can apply the major theories, concepts and research related to culture, diversity and equity in order to support academic access and opportunity for CLD student populations.

5.11 Quality Standard III: Educators should understand literacy development for CLD students.

5.11(1) Element A: Educators are knowledgeable in and can apply the major theories, concepts and research related to literacy development for CLD students.

5.11(2) Element B: Educators understand and can implement strategies and select materials to aid in English language and content learning.

5.12 Quality Standard IV: Educators are knowledgeable in the teaching strategies, including methods, materials and assessment for CLD students.

5.12(1) Element A: Educators are knowledgeable in, understand and able to use the major theories, concepts, and research related to language acquisition and language development for CLD students.

5.12(2) Element B: Educators are knowledgeable in and can use progress monitoring, in conjunction with formative and summative assessments, to support student learning.

6.00 Principal and Administrator Licensure Standards

Principal Quality Standards

A principal must demonstrate an understanding of the Colorado Academic Standards; the Colorado Reading To Ensure Academic Development Act (Colorado READ Act) including the evidence-based training standards for school administrators as outlined in 1 CCR 301-92, rule 13.01 (D)(1-4); strict data privacy and security practices; special education laws regulations, as outlined in section 23-1-121(2)(c.7), C.R.S.; educator evaluator training standards as outlined in 1 CCR 301-87, rule (5.3)(H)(2)(a)-(e); and professional practices to address multiple pathways for students to be postsecondary and workforce ready, as outlined in sections 22-2-106, 22-2-136, 22-7-1003(15), and 22-32-109, C.R.S. The following standards must guide the development of the content of principal preparation programs offered by accepted institutions of higher education, designated agencies and individualized alternative principal programs and must guide the ongoing professional development of these principals.

6.01 Quality Standard I: Principals demonstrate organizational leadership by strategically developing a vision and mission, leading change, enhancing the capacity of personnel, distributing resources and aligning systems of communication for continuous school improvement.

6.01(1) Element A: Principals collaboratively develop the vision, mission and strategic plan, based on a cycle of continuous improvement of student outcomes, and facilitate their integration into the school community.

6.01(2) Element B: Principals collaborate with staff and stakeholders to implement strategies for change to improve student outcomes.

6.01(3) Element C: Principals establish and effectively manage systems that ensure high-quality staff.

6.01(4) Element D: Principals establish systems and partnerships for managing all available school resources to facilitate improved student outcomes.

6.01(5) Element E: Principals facilitate the design and use of a variety of communication strategies with all stakeholders.

6.02 Quality Standard II: Principals demonstrate inclusive leadership practices that foster a positive school culture and promote safety and equity for all students, staff and community members.

6.02(1) Element A: Principals create a professional school environment and foster relationships that promote staff and student success and well-being.

6.02(2) Element B: Principals ensure that the school provides an orderly and supportive environment that fosters a sense of safety and well-being.

6.02(3) Element C: Principals commit to an inclusive and positive school environment that meets the needs of all students and promotes the preparation of students to live productively and contribute to the diverse cultural contexts of a global society.

6.02(4) Element D: Principals create and utilize systems to share leadership and support collaborative efforts throughout the school.

6.02(5) Element E: Principals design and/or utilize structures and processes which result in family and community engagement and support.

6.03 Quality Standard III: Principals demonstrate instructional leadership by: aligning curriculum, instruction and assessment; supporting professional learning; conducting observations; providing actionable feedback; and holding staff accountable for student outcomes.

6.03(1) Element A: Principals establish, align and ensure implementation of a district/BOCES plan of instruction, instructional practice, assessments and use of student data that result in academic growth and achievement for all students.

6.03(2) Element B: Principals foster a collaborative culture of job-embedded professional learning.

6.03(3) Element C: Principals demonstrate knowledge of effective instructional practice and provide feedback to promote continuous improvement of teaching and learning.

6.03(4) Element D: Principals hold all staff accountable for setting and achieving measurable student outcomes.

6.04 Quality Standard IV: Principals demonstrate professionalism through ethical conduct, reflection and external leadership.

6.04(1) Element A: Principals demonstrate high standards for professional conduct.

6.04(2) Element B: Principals link professional growth to their professional goals.

6.04(3) Element C: Principals build and sustain productive partnerships with key community stakeholders, including public and private sectors, to promote school improvement, student learning and student well-being.

6.05 English Language Learner Principal Quality Standards

In order to ensure that all Colorado school-based leaders are well-equipped and able to support Colorado educators in teaching the state's diverse student population, all principal pre-service programs including approved programs of preparation at Colorado institutions of higher education, designated agencies and individualized alternative principal programs must ensure the standards outlined in sections 5.09 to 5.12 of these rules are fully taught, addressed and practiced in their programs.

6.06 Administrator Quality Standards

An administrator applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education, must have completed an approved administrator program, and must have demonstrated the competencies specified below.

In addition to knowledge of and the ability to demonstrate the requirements in sections 6.01- 6.05 (Principal Quality Standards) of these rules, the following administrator rules describe additional competencies required to lead at the district level and serve as standards for authorization of program content for educator preparation programs preparing administrators and licensing of all administrator candidates.

6.07 Administrators demonstrate organizational leadership, including responsibility for:

- 6.07(1) district/program vision, mission and strategic plan;
- 6.07(2) continual and sustainable district/program improvement;
- 6.07(3) recruitment, development, supervision, evaluation and retention of high-quality personnel;
- 6.07(4) district and community partnerships;
- 6.07(5) communication with internal and external stakeholders;
- 6.07(6) fiscal and resource management, as well as resource-development strategies; and
- 6.07(7) compliance with policies, laws, rules and regulations.

6.08 Administrators demonstrate inclusive leadership practices and systems that include responsibility for:

- 6.08(1) coherent systems of teaching, learning and leading, including curricular and extracurricular activities;
- 6.08(2) positive culture and climate for staff and student success and well-being;
- 6.08(3) safe and orderly environments for the protection and welfare of all;
- 6.08(4) equitable and inclusive practices to address diverse student populations and needs;
- 6.08(5) systems for collaborative and distributed leadership; and

6.08(6) family and community engagement.

6.09 Administrators demonstrate instructional leadership that includes responsibility for:

6.09(1) aligned systems of curriculum, instruction and assessment;

6.09(2) professional learning for all staff that supports student learning;

6.09(3) student outcomes for growth, achievement, engagement and post-secondary and workforce readiness; and

6.09(4) continuous improvement accountability systems (e.g., goal setting, data-informed decisions, multi-tiered systems of support and research-based practices).

6.10 Administrators demonstrate professionalism that includes responsibility for:

6.10(1) ethical behavior and professional norms;

6.10(2) conflict resolution, problem solving and decision making;

6.10(3) board-administrator relationships;

6.10(4) partnerships with internal stakeholders and external organizations; and

6.10(5) democratic and civic participation and advocacy.

6.11 Standards for Professional Competencies for an Initial Administrator License with a Director of Special Education Endorsement

In addition to knowledge of and the ability to demonstrate the requirements in sections 6.06-6.11 of these rules (Administrator Quality Standards), the following standards must be addressed by an accepted institution of higher education's director of special education initial preparation. They are also the standards for the ongoing professional development of these educators. The specific performance indicators for each of these standards must be described in the Department's Performance Indicators for Professional Competency Standards.

6.12 Quality Standard I – Foundations for Leadership: The director of special education must have a solid foundation for leadership by: (a) demonstrating a comprehensive knowledge of special education organization, programs, laws and best practices; and (b) setting high standards and a positive direction for special education consistent with the values, mission and vision of the state and administrative unit.

6.13 Quality Standard II – Special Education and School Systems: The director of special education must demonstrate knowledge of organizational culture, apply a systems approach to the development of special education programs and processes and facilitate effective system change.

6.14 Quality Standard III – Law and Policy: The director of special education is knowledgeable about and able to apply relevant federal and state statutes, regulations, case law and policies that impact all children, including those with disabilities.

6.15 Quality Standard IV – Instructional Leadership: The director of special education is able to integrate general education and special education, including curriculum, instructional strategies, assessments and individualized instruction, in support of academic achievement for all children, including those with disabilities.

6.16 Quality Standard V – Program Planning and Organization: The director of special education is able to evaluate the efficacy and efficiency of special education programs, facilities, services and monitoring systems. The director is able to use the evaluation data to improve the programs and services for all children, including those with disabilities.

6.17 Quality Standard VI – Human Resource Functions: The director of special education must have the knowledge and ability to recruit, retain and evaluate qualified personnel.

6.18 Quality Standard VII – Parent, Family and Community Engagement: The director of special education is knowledgeable about and able to facilitate partnerships and engage parents, families and communities in the implementation of special education programs.

6.19 Quality Standard VIII – Budget and Resources: The director of special education is knowledgeable about and able to demonstrate school district budgeting and resource allocation, including those related to special education.

6.20 Standards for Professional Competencies for an Initial Administrator License with a Director of Gifted Education Endorsement

In addition to knowledge of and the ability to demonstrate the requirements in section 6.06 (Administrator Quality Standards) of these rules, the following standards must be addressed by the director of gifted education initial preparation program offered by accepted institutions of higher education. They must also guide the ongoing professional development of these educators. The director of gifted education must demonstrate the performance indicators specific to gifted education and the Department's Performance Indicators for Professional Competency Standards.

6.21 Quality Standard I - Foundations for Leadership: The director of gifted education is knowledgeable about professional, ethical leadership and supports educators, students, family and community members to effectively address outcomes for gifted learners. The director sets high standards and a positive direction for gifted education consistent with values, mission and vision of the state and administrative unit.

6.21(1) Element A: The director of gifted education demonstrates methods to develop vision, mission, goals and design for gifted education programs.

6.21(2) Element B: The director brings together stakeholders to implement general program and gifted-student goals and best practices in gifted education.

6.21(3) Element C: The director implements collaborative decision-making strategies, as appropriate.

6.21(4) Element D: The director applies knowledge of models and practices in change theory for improvement efforts.

6.21(5) Element E: The director is able to define, advocate for, and make changes with regard to issues in gifted education.

6.22 Quality Standard II - Gifted Education and School Systems: The director of gifted education is knowledgeable about organizational culture, applies a systems approach to the development of gifted education programs and implements processes in order to facilitate effective system change.

6.22(1) Element A: The director of gifted education understands how systems within a district or administrative unit influence gifted-student instruction and performance.

6.22(2) Element B: The director fosters a school and community culture that supports gifted-student programming within and outside the school setting.

6.22(3) Element C: The director applies a systems approach for developing gifted programs to enhance integrated support and service to gifted students and their families.

6.23 Quality Standard III - Law and Policy: The director of gifted education must have comprehensive knowledge and the ability to apply state and federal laws, regulations, case laws and policies that impact all children, including those with exceptional academic and talent aptitude.

6.23(1) Element A: The director of gifted education demonstrates proficiency in gifted education policy, regulations, case law and federal programs supporting key instructional needs of gifted students.

6.23(2) Element B: The director identifies needs and recommends and promotes new policies.

6.23(3) Element C: The director clarifies law and regulations for all stakeholders.

6.23(4) Element D: The director ensures implementation of privacy laws and district confidentiality and privacy policies.

6.23(5) Element E: The director develops, revises, and/or make recommendations to amend school board or administrative unit policy to align with laws and regulations.

6.24 Quality Standard IV - Instructional Leadership: The director of gifted education is able to blend the resources of general and gifted education for the positive benefit of gifted students. The director is knowledgeable about best practices for gifted learners, including specialized curriculum, effective instructional strategies, assessments, social-emotional/affective support and individualized instruction.

6.24(1) Element A: The director of special education demonstrates knowledge of and support for identification methods and procedures.

6.24(2) Element B: The director interprets and shares data to increase the identification of under-identified, underserved populations and aligns professional development initiatives to needs.

6.24(3) Element C: The director understands models of differentiation, acceleration and research-based instructional practices that support rigor, challenge, depth and complexity in instruction and assessment for gifted students.

6.24(4) Element D: The director establishes high expectations for all gifted students and families, including underserved populations and twice-exceptional learners.

6.24(5) Element E: The director monitors standards-based advanced learning plans in order to ensure alignment of programming options to gifted students' needs.

6.24(6) Element F: The director blends the instructional needs of gifted students into the school system.

6.24(7) Element G: The director supports and defends gifted education initiatives within the general education setting.

6.25 Quality Standard V - Program Planning and Organization: The director of gifted education evaluates the efficacy and efficiency of gifted education programing, delivery settings, services and monitoring systems and uses evaluation data to improve the programs and services for all children, including those with exceptional academic and talent aptitude.

6.25(1) Element A: The director of gifted education designs and implements needs-assessments and uses data to inform restructuring or adjustments to gifted programs.

6.25(2) Element B: The director develops and implements action plans for gifted education based upon student outcomes, challenges, root causes, improvement strategies and benchmarks.

6.25(3) Element C: The director is knowledgeable about effective, research-based gifted education models and practices that have positive impacts on gifted students.

6.25(4) Element D: The director supports and/or builds gifted programs that effectively embed district and alternative pathways to college and career outcomes.

6.26 Quality Standard VI - Human resource functions: The director of gifted education is able to recruit, retain, supervise and evaluate qualified personnel.

6.26(1) Element A: The director of gifted education understands educator effectiveness standards in order to observe and evaluate teachers of gifted students.

6.26(2) Element B: The director designs ongoing professional development that increases educators' capacity to understand and address the needs of gifted students.

6.26(3) Element C: The director promotes an understanding and sensitivity toward culture, ethnicity and diversity of language within staff and student body.

6.26(4) Element D: The director understands the skills and knowledge necessary for educators to meet the specific needs of gifted and talented students.

6.27 Quality Standard VII - Parent, Family and Community Partnership: The director of gifted education is knowledgeable about effective communication, decision-making, problem-solving and conflict-resolution strategies. The director must be able to facilitate partnerships and engage parents, families, educators, administrators, students and communities in the implementation of gifted education programs.

6.27(1) Element A: The director of gifted education promotes understanding, resolves conflicts and builds consensus for improving gifted programs.

6.27(2) Element B: The director develops the infrastructure to include parents, families and the community in the gifted education program.

6.27(3) Element C: The director applies methods and systems to maximize parent and family involvement.

6.27(4) Element D: The director implements family partnership practices that support gifted student achievement and school involvement.

6.27(5) Element E: The director cooperatively develops and shares a vision for the district or administrative unit that supports and promotes gifted education.

6.28 Quality Standard VIII - Budget and Resources: The director of gifted education must be able to budget and allocate resources related to gifted education.

6.28(1) Element A: The director of gifted education develops and manages a gifted education budget. The director facilitates stakeholders' involvement in a collaborative budget development process.

6.28(2) Element B: The director leverages resources for gifted education within school systems.

6.28(3) Element C: The director's gifted education budget addresses state requirements.

6.28(4) Element D: The director conducts research and needs assessments in order to accurately identify specific budget needs and promotes initiatives for gifted education funding through grants and other funding opportunities.

7.00 Renewal of Colorado Licenses

The following must serve as standards for the renewal of initial and professional licenses and master certificates and endorsements thereon.

7.01 Initial Licenses

An initial teacher, special services [provider](#), principal or administrator license and endorsements may be renewed once for a period of three years for applicants who have not completed the requirements for a professional license as specified in sections 3.05-3.07 of these rules. The State Board of Education may renew the license-holder's initial license for one or more additional three-year periods for good cause if the holder is unable to complete an approved induction program for reasons other than incompetence. A renewal request must include a complete application for renewal, payment of the required fee, and a statement concerning the circumstances related to the applicant's inability to complete the induction program.

7.02 Professional Licenses

A professional teacher, special services [provider](#), principal or administrator license and endorsements may be renewed for a period of seven years upon submission of a complete application for renewal, payment of the required fee and completion of professional development activities that meet the requirements of this section 7.02. To be eligible to renew a professional license, the holder must complete such activities within the period of time for which the professional license is valid or, if expired, within the seven years immediately preceding the date of application. An applicant for renewal must meet the following requirements:

7.02(1) Professional development activities: An educator requesting license renewal must complete professional development activities equivalent to six semester hours or 90 contact hours. Applicants must electronically submit an affidavit attesting to the completion of applicable professional development. Such activities must be related to increasing the license-holder's competence in his or her existing or potential endorsement area; to increasing the license-holder's skills and competence in delivery of instruction in his or her existing or potential endorsement area; to evidence-based practices for teaching reading and literacy; or to culturally and linguistically diverse education. Professional development activities may be selected from one or more of the following:

7.02(1)(a) In-service education: School districts and BOCES are approved entities for in-service education programs. One semester hour of credit may be granted for every 15 contact hours of participation.

7.02(1)(b) College or university credit: College or university credit may be earned from accepted institutions of higher education or accepted community, technical or junior colleges. Courses must be directly related to the standards for professional development as provided in section 7.02 of these rules. Copies of official transcripts may be submitted, in addition to the online affidavit form, as evidence of completion of college/university credit. Though submission of official transcripts is not required, the Department may audit renewal applications to verify college or university credit.

7.02(1)(c) Educational travel: Educational travel must be directly applicable to the endorsement area of the license-holder as documented by the license-holder and accompanied by supervisor verification. One semester hour of credit may be granted for every 15 contact hours of involvement. Travel time to and from the intended destination must not be included in the hours accumulated.

7.02(1)(d) Involvement in school and/or district initiatives: One semester hour of credit may be granted for every 15 contact hours of participation. When verified by the license-holder's supervisor, activities may include, but are not limited to:

7.02(1)(d)(i) membership on school site or district accountability or improvement committee(s);

7.02(1)(d)(ii) curriculum, standards or assessment development or implementation in the license-holder's endorsement area;

7.02(1)(d)(iii) the implementation of standards;

7.02(1)(d)(iv) the development or implementation of evidence-based practices for teaching reading, literacy or numeracy; and

7.02(1)(d)(v) professional development in the area of culturally and linguistically diverse education.

7.02(1)(e) Internships/Externships: Advanced field experiences offered as part of graduate study or other professional training and designed to acquire knowledge or enhance the skills of the educator may qualify as an internship. The internship must be directly related to the standards for professional development as provided in section 7.02 of these rules. One semester hour of credit may be accepted for every 15 contact hours of participation. Official transcripts or supervisor verification must be submitted, in addition to the online renewal summary form, as evidence of completion.

7.02(1)(f) Ongoing professional development and training experiences: Online or in-person professional development confirmed by certificate or documentation of completion or instructor verification, attendance or presentation at professional conferences; service on statewide or national educational task forces or boards; professional research and publication; supervision of student teachers or interns; mentorships; and the pursuit of national educator certification.

7.02(2) For renewal of a professional teacher license, at least 10 of the 90 contact hours of professional development activities required must be related to:

7.02(2)(a) behavioral health training that is culturally responsive and trauma- and evidence-informed; and

7.02(2)(b) increasing awareness of laws and practices relating to educating students with disabilities in the classroom.

7.02(2)(c) The behavioral health training required pursuant to section 7.02(2)(a) may include:

7.02(2)(c)(i) mental health first-aid training, specific to youth and teens;

7.02(2)(c)(ii) training modules concerning teen suicide prevention;

7.02(2)(c)(iii) training on interconnected systems framework for positive behavioral interventions and supports and mental health;

7.02(2)(c)(iv) training approved or provided by the school district where the teacher is employed;

7.02(2)(c)(v) training concerning students with behavioral concerns or disabilities;

7.02(2)(c)(vi) training modules concerning child traumatic stress; and

7.02(2)(c)(vii) any other program or training that meets the requirements of Rule 7.02(2)(a).

7.02(2)(d) The training regarding students with disabilities required pursuant to section 7.02(2)(b) must increase awareness of laws and practices relating to educating students with disabilities in the classroom, including, but not limited to, Child Find and inclusive learning environments.

7.02(3) A teacher may obtain the 10 hours required by section 7.02(2) through any combination of courses as long as that combination includes at least one hour of training in each area. A single professional development course or activity may satisfy both content requirements.

7.02(4) For renewal of a professional special services provider, principal or administrator license, at least 10 of the 90 contact hours of professional development activities required for renewal must be in professional development activities related to increasing awareness of laws and practices relating to educating students with disabilities in the classroom, as described in section 7.02(2)(b).

7.02(5) Professional license-holders must meet the requirement outlined in this section 7.02(2) or 7.02(4), as applicable, during the term of the license, each seven-year renewal cycle except that a professional license-holder who had less than three years left in the license renewal period on June 30, 2020 has until the end of the following applicable renewal period to satisfy the requirements.

7.02(6) Except for the activities undertaken to satisfy the requirements of Rule 7.02(2) and 7.02(4) above, activities completed for professional license renewal must be directly related to one or more of the following standards:

7.02(6)(a) knowledge of subject matter content and learning, including knowledge and application of the Colorado Academic Standards, special education laws and processes, postsecondary workforce readiness, career counseling, multi-tiered systems of support and other appropriate student-based supports;

7.02(6)(b) knowledge of the Teacher and Special Services Provider Quality Standards, Principal Quality Standards and Administrator Quality Standards as outlined in sections 5.00, 6.00 and 6.06 of these rules;

7.02(6)(c) knowledge of the English Language Learner Educator Standards as outlined in sections 5.09-5.12 of these rules;

7.02(6)(d) knowledge of content area endorsement standards as outlined in 1 CCR 301-101;

7.02(6)(e) knowledge of the standards for preparation of Special Education and Gifted Education as outlined in sections 6.08 and 6.17 of these rules;

7.02(6)(f) knowledge of the Colorado Reading to Ensure Academic Development (READ) Act as outlined in 1 CCR 301-92;

7.02(6)(g) effective organization, leadership and management of human and financial resources to create a safe and effective working and learning environment;

7.02(6)(h) awareness of warning signs of dangerous behavior in youth and situations that present a threat to themselves and to the health and safety of students, and knowledge of the community resources available to enhance the health and safety of other students and the school community, youth mental health, safe de-escalation of crisis situations, recognition of signs of poor mental health and substance use, and support of students;

7.02(6)(i) effective teaching of the democratic ideal;

7.02(6)(j) recognition, appreciation and support for ethnic, cultural, gender, economic and human diversity to create inclusive learning environments that foster fair and equitable treatment and consideration for all;

7.02(6)(k) effective communication with students, colleagues, parents and the community;

7.02(6)(l) effective modeling of appropriate behaviors to ensure quality learning experiences for students and for colleagues;

7.02(6)(m) consistently ethical behavior and creation of an environment that encourages and develops responsibility, ethics and citizenship in self and others;

7.02(6)(n) achievement as a continuous learner who encourages and supports personal and professional development of self and others; or

7.02(6)(o) awareness of laws and practices relating to educating students with disabilities in the classroom, including, but not limited to, Child Find and inclusive learning environments.

7.02(7) Professional development activities completed by an applicant for license renewal must apply equally to renewal of any professional educator license or endorsement held by the applicant.

7.02(8) Upon completion of the professional development activities and within the six months prior to the expiration of the professional license(s) to be renewed, the applicant must submit:

7.02(8)(a) a complete application for license renewal, including a signed affidavit in which the license-holder affirms under oath that:

7.02(8)(a)(i) the license-holder satisfactorily completed the ongoing professional development activities specified in the affidavit;

7.02(8)(a)(ii) the activities were completed within the term of the professional license; and

7.02(8)(a)(iii) to the best of the license-holder's knowledge, the activities comply with the requirements of section 7.02 of these rules and section 22-60.5-110, C.R.S.;

7.02(8)(b) a statement of how the activities selected aided the license-holder in meeting the standards for professional educators;

7.02(8)(c) the required evaluation fee;

7.02(8)(d) the oath required in section 2.04(2)(f) of these rules; and

7.02(8)(e) a complete set of license-holder's fingerprints taken by a qualified law enforcement agency, an authorized employee of a school district or Board of Cooperative Services using fingerprinting equipment that meets the Federal Bureau of Investigation image quality standards, or any third party approved by the Colorado Bureau of Investigation, unless the applicant previously submitted a complete

and approved set of fingerprints to the Colorado Bureau of Investigation and satisfactory record of this submission is on file with the Department.

7.02(9) The Department will evaluate the application and supporting evidence and renew the license, request additional information or explanation, or recommend denial of the license renewal if the requirements of section 7.02(4) of these rules are not met.

7.02(10) Master certificates. License-holders who hold master certificates in conjunction with professional licenses may renew the master certification by providing evidence that the license-holder continued to engage in professional development and leadership and continued to demonstrate advanced competencies and expertise during the period in which the master certificate was valid. Master certificates are valid for the period of time for which a professional license is valid and are renewable upon expiration of the license.

7.02(10)(a) Professional development activities for the renewal of master certificates may include but need not be limited to: involvement in school reform efforts; service on state-wide boards or commissions; supervision and mentorship of advanced-level practicum or internship students; advanced study appropriate to standards 5.00 or 6.00 of these rules; and original research and/or publication.

English Language Learner Professional Development

7.02(11) Effective beginning in the 2018-2019 school year and every year thereafter, educators endorsed in elementary, math, science, social studies or English language arts, and seeking a renewal of their professional license, must complete professional development activities equivalent to 45 contact hours or three semester hours in Culturally and Linguistically Diverse (CLD) Education within the seven-year renewal period. The activities must meet or exceed the standards set forth in section 7.02 and in sections 5.09-5.12 of these rules. This requirement must only be completed once. Professional development activities completed to satisfy this requirement may also be counted toward the requirements in section 7.02(1).

7.02(11)(a) Educators may demonstrate knowledge of the standards outlined in sections 5.09-5.12 of these rules in one or in a combination of the following ways:

7.02(11)(a)(i) through a collection of professional development, in-service credit, college/university credit and/or work experience that meet the standards as outlined;

7.02(11)(a)(ii) completion of any Department-approved English Language Learner pathway, which may include district, college or university, BOCES or nonprofit programs;

7.02(11)(a)(ii)(A) Agencies wishing to become an approved pathway may submit an application for approval of an English Language Learner pathway to the Department's Educator Talent Division.

7.02(11)(a)(ii)(B) Approved pathways will be reviewed every three years to ensure consistency and alignment to the standards as noted.

7.02(11)(a)(iii) completion of a Colorado CLD or a related out-of-state endorsement (such as English as a Second Language); and/or

7.02(11)(a)(iv) completion of a Department-facilitated English Language Learner professional development pathway.

7.02(11)(b) A district superintendent annually may request a waiver from the English language learner professional development requirements for their educators endorsed in elementary, math, science, social studies or English language arts if the district has had an average of 2% or fewer identified

English language learners in the three years immediately preceding such request, as identified in the Department's annual Student October Pupil Enrollment data collection.

7.02(11)(c) The principal of a charter school authorized by the institute annually may request a waiver from the English language learner professional development requirements for educators in their charter school authorized by the institute endorsed in elementary, math, science, social studies or English language arts if the charter school has had an average of 2% or fewer identified English language learners in the three years immediately preceding such request as identified in the Department's annual Student October Pupil Enrollment collection.

7.02(11)(d) Upon submission of an application for renewal, license-holders must also submit the superintendent's or institute's notice of request for waiver. The Department will evaluate the waiver request based on the average of the last three years of the English language learner population in the district.

7.03 Appeals Process

An applicant whose application for renewal of any license has been denied by the Department may submit an appeal to the State Board of Education. If the State Board of Education finds that the applicant has met the criteria for license renewal, the Department must approve the license renewal.

7.04 Reinstatement of Expired Licenses or Certificates

An applicant whose previous professional license or certificate was not renewed may reinstate his or her professional license or certificate by:

7.04(1) completing and submitting a renewal application including:

7.04(1)(a) evidence to satisfy the deficiencies that resulted in prior nonrenewal, including, but not limited to, evidence of completion of professional development requirements as provided in section 7.02 of these rules. An applicant seeking reinstatement must have completed professional development activities totaling either six semester hours or 90 clock-hours within the seven-year period preceding the application for reinstatement; and

7.04(1)(b) the renewal fee set by the State Board of Education.

7.04(2) In the event that a license or certificate is expired, the applicant must submit new fingerprints to the CBI and the results must be transferred to the Department, as provided by section 2.04(1) of these rules.

8.00 Approved Induction Programs for Teachers, Special Services Providers and Authorization-Holders

Initial licenses are valid only in school districts, nonpublic schools, BOCES or charter schools that provide approved induction programs unless the State Board of Education has waived the induction program requirement as provided in section 15.00 of these rules. Colorado school districts, consortia of districts, BOCES, nonpublic schools, charter schools, the institute or other educational entities that employ licensed educators (herein referred to as providers for the purposes of this section 8.00 only) may develop induction programs for initial license-holders and holders of authorizations. Induction programs must meet the criteria of these rules and be approved by the Department. The Department may grant initial or continuing approval to induction programs.

Each induction program must conduct a self-evaluation every five years. The evaluation information must be submitted to the Department for use in evaluating renewal of the induction program. The Department may conduct visits to induction sites and survey participants regarding the effectiveness of the program.

8.01 Criteria for Approval and Review of Induction Programs for Teachers

The following must serve as criteria for the approval of induction programs for teachers. The Department must provide technical assistance and support in the development of successful induction programs.

8.01(1) Effective induction programs must include opportunities which:

8.01(1)(a) enhance educator performance according to the quality standards prescribed in section 5.00 of these rules by providing through mentors and other professionals:

8.01(1)(a)(i) demonstrations of high-quality instructional practices;

8.01(1)(a)(ii) improvement of educational experiences for all students; and

8.01(1)(a)(iii) ways to adapt curriculum and instruction to accommodate diverse student populations.

8.01(1)(b) encourage professionalism and educator development by:

8.01(1)(b)(i) building a foundation for the continued study of teaching;

8.01(1)(b)(ii) encouraging collaborative relationships among administrators and teachers and partnerships between providers and universities;

8.01(1)(b)(iii) providing an orientation for teachers to the culture of the provider, the community and the teaching profession;

8.01(1)(b)(iv) providing a thorough orientation to the provider's educator effectiveness evaluation model; and

8.01(1)(b)(v) providing opportunities for professional growth and ongoing professional development and training, including ethics, for both teachers and mentors.

8.01(2) Effective induction programs must establish:

8.01(2)(a) a training program for site administrators in the Colorado Academic Standards, the Teacher Quality Standards and the educator induction process;

8.01(2)(b) standards for the selection and training of mentors who work with teachers;

8.01(2)(c) an assessment model to review, evaluate and guide the induction program;

8.01(2)(d) a process for the selection and training of mentors and for the matching of mentors with inductees;

8.01(2)(e) the primary role of the mentor as coach, advocate, support and guide for teachers; and

8.01(2)(f) whether mentors will be included in the evaluation of inductees. If mentors are to be involved in such evaluations, policies must state the specific roles and responsibilities of the mentor in evaluations.

8.01(3) Effective induction programs must include professional support for inductees that includes:

8.01(3)(a) information relating to the Colorado Academic Standards and Teacher Quality Standards;

8.01(3)(b) detailed information regarding the educator effectiveness evaluation model;

8.01(3)(c) information related to provider's policies and procedures, including how policies, procedures and practices are updated;

8.01(3)(d) the provider's goals and induction program content standards;

8.01(3)(e) educator roles and responsibilities, including moral and ethical conduct;

8.01(3)(f) information about the school community;

8.01(3)(g) substantive feedback to the inductee about performance; and

8.01(3)(h) provisions for the extension of the induction program if deemed necessary by the provider.

8.01(4) Effective induction programs should:

8.01(4)(a) develop plans and policies that:

8.01(4)(a)(i) encourage collaboration between LEP induction programs, professional organizations and institutions of higher education;

8.01(4)(a)(ii) provide release time for both mentors and inductees; and

8.01(4)(a)(iii) provide some form of compensation for mentors.

8.01(4)(b) formalize commitments to:

8.01(4)(b)(i) provide inductees with supervisors and mentors skilled in assisting teachers;

8.01(4)(b)(ii) provide pathways that address potential challenges within the mentor-inductee relationship (e.g., reassignment, conflict management and grievance processes);

8.01(4)(b)(iii) define clear roles and conditions to support school leadership and mentors to work in partnerships focused on improving teacher instructional practice; and

8.01(4)(b)(iv) clarify expectations for inductees and mentors.

8.01(4)(c) adopt guidelines for mentor selection that ensure:

8.01(4)(c)(i) each mentor is an experienced professional who consistently models the quality standards outlined in section 5.00 of these rules and who has demonstrated excellence in practice as measured by the provider's educator effectiveness system; and

8.01(4)(c)(ii) each mentor is skilled in working with adult learners and is sensitive to the viewpoints of others.

8.01(4)(d) adopt guidelines for mentor assignment that ensure:

8.01(4)(d)(i) each mentor is closely matched to the inductee in terms of assignment; and

8.01(4)(d)(ii) each mentor is located, when possible, in close proximity to the inductee.

8.01(5) Effective induction programs should implement best practices, including:

8.01(5)(a) utilizing appropriate needs assessments to identify specific and appropriate programming for inductees;

8.01(5)(b) promoting a sequential learning plan for inductees based on current level of knowledge and skills;

8.01(5)(c) ensuring mentors are onboarded and trained in the components of the induction program;

8.01(5)(d) ensuring, when possible, that mentors do not serve as evaluators;

8.01(5)(e) providing mentors with ongoing professional learning and support for their mentoring activities;

8.01(5)(f) providing communities of practice for mentors, when possible;

8.01(5)(g) ensuring inductees participate in some form of learning community to foster problem-solving and collaborative inquiry; and

8.01(5)(h) engaging in annual program review with all stakeholders to promote systemic change and continuous improvement.

8.02 Criteria for Approval and Review of Induction Programs for Special Services Providers

The following must serve as criteria for the approval of induction programs for special services providers (SSPs). The Department must provide technical assistance in the development of induction programs and disseminate information concerning successful programs.

8.02(1) Effective induction programs must include opportunities for SSPs which:

8.02(1)(a) enhance SSP performance according to the quality standards prescribed in section 5.00 of these rules by providing through mentors and other professionals:

8.02(1)(a)(i) demonstrations of high-quality instructional and/or evidence-based practices specific to the discipline;

8.02(1)(a)(ii) improvement of educational experiences for all students; and

8.02(1)(a)(iii) ways to accommodate diverse student populations.

8.02(1)(b) encourage professionalism and SSP development by:

8.02(1)(b)(i) building a foundation for the continued study of the SSP's discipline;

8.02(1)(b)(ii) encouraging collaborative relationships within the school system and partnerships between providers, institutions of higher education and community organizations;

8.02(1)(b)(iii) providing an orientation for SSPs to the application of the profession in the educational context, including the culture of the school system, the provider and the community;

8.02(1)(b)(iv) providing a thorough orientation to the provider's SSP effectiveness evaluation model; and

8.02(1)(b)(v) providing opportunities for professional growth and ongoing development and training, including ethics, for both SSPs and mentors.

8.02(2) Effective induction programs must establish:

8.02(2)(a) standards for the selection and training of mentors who work with SSPs;

8.02(2)(b) an assessment model to review, evaluate and guide the induction program;

8.02(2)(c) a process for the selection and training of mentors and for the matching of mentors with inductees;

8.02(2)(d) the primary role of the mentor as teacher, coach, advocate, support and guide for SSPs; and

8.02(2)(e) whether mentors will be included in the evaluation of inductees. If mentors are to be involved in such evaluations, policies must state the specific roles and responsibilities of the mentor in evaluations and provide training for mentors in those roles.

8.02(3) Effective induction programs must include professional support for inductees that includes information about:

8.02(3)(a) the SSP quality standards and how specific SSP disciplines interact with the Colorado Academic Standards, [Individualized Education Program training and school](#) and special education law as applicable to each discipline;

8.02(3)(b) the provider's SSP effectiveness evaluation model;

8.02(3)(c) the provider's policies and procedures, including how policies, procedures and practices are updated;

8.02(3)(d) the provider's goals and induction program content standards;

8.02(3)(e) SSP roles and responsibilities, including moral and ethical obligations;

8.02(3)(f) the school community;

8.02(3)(g) substantive feedback to the inductee about performance; and

8.02(3)(h) provisions for the extension of the induction program if deemed necessary by the provider.

8.02(4) Effective induction programs:

8.02(4)(a) develop plans and policies that include:

8.02(4)(a)(i) release time for both mentors and inductees; and

8.02(4)(a)(ii) some form of compensation for mentors.

Commented [TK6]: Recommendation from stakeholder/advisory/advocacy groups held in Spring 2023.

8.02(4)(b): formalize commitments to:

8.02(4)(b)(i) provide inductees with supervisors skilled in helping SSPs and mentors skilled in the specific SSP discipline;

8.02(4)(b)(ii) clarify expectations for inductees and mentors; and

8.02(4)(b)(iii) provide supports that address potential challenges within the mentor-inductee relationship (e.g., reassignment, conflict management and grievance processes).

8.02(4)(c) adopt guidelines for mentor selection that ensure:

8.02(4)(c)(i) each mentor is an experienced professional within the SSP discipline who consistently models the quality standards as reflected in section 5.00 of these rules;

8.02(4)(c)(ii) each mentor is skilled in working with adult learners and is sensitive to the viewpoints of others; and

8.02(4)(c)(iii) the mentor is an active and open learner who is competent in interpersonal skills and has a record of being an ambassador for the provider and the profession; and

8.02(4)(d) adopt guidelines for mentor assignment that ensure:

8.02(4)(d)(i) each mentor is closely matched to the inductee in terms of discipline and assignment; and

8.02(4)(d)(ii) each mentor is located in close proximity to the inductee, when possible, though experience within the SSP discipline may be considered as a priority over proximity to the inductee.

8.02(5) Effective SSP induction programs should implement best practices, including:

8.02(5)(a) utilizing appropriate needs assessments to identify specific and appropriate programming for inductees;

8.02(5)(b) promoting a sequential learning plan for inductees based on current level of knowledge and skills;

8.02(5)(c) providing differentiated, meaningful professional learning related to the specific roles and tasks of the SSP;

8.02(5)(d) cultivating capacity for collaboration and self-advocacy to enhance the working conditions, job satisfaction and efficacy of SSPs;

8.02(5)(e) providing the inductee with a safe, collegial atmosphere where professional growth takes place;

8.02(5)(f) promoting systemic change and continuous improvement, including input from inductees and a program emphasis on student learning; and

8.02(5)(g) ensuring, when possible, that mentors do not serve as evaluators.

9.00 Approved Induction Programs for Principals and Administrators

Initial licenses are valid only in school districts, nonpublic schools, BOCES or charter schools which provide approved induction programs, unless the State Board of Education has waived the induction program requirements as provided in section 15.00 of these rules.

Colorado school districts, consortia of districts, BOCES, nonpublic schools, charter schools, the institute or other educational entities that employ licensed principals and administrators may develop induction programs for initial license-holders and holders of applicable authorizations. Induction programs must meet the criteria of these rules and be approved by the Department. The Department may grant initial or continuing approval for induction programs.

Each induction program must conduct a self-evaluation every five years. The evaluation information must be submitted to the Department for use in evaluating renewal of the induction program. The Department may conduct visits to induction sites and survey participants regarding the effectiveness of the program.

9.01 Criteria for Approval and Review of Induction Programs for Principals and Administrators

The following must serve as criteria for the approval of induction programs for principals, administrators and directors of special and gifted education. Induction programs must follow the same criteria and ensure Quality Standards are met as outlined in sections 6.06 – 6.28. The Department must provide technical assistance and support in the development of successful induction programs.

9.01(1) Effective induction programs must provide inductees:

9.01(1)(a) support for school improvement planning and processes;

9.01(1)(b) support for the application of effective, research-based teaching practices in an emotionally, intellectually and physically safe learning environment;

9.01(1)(c) assistance with systems of collaboration with families, colleagues, instructional teams and the broader educational community to ensure the success of all students;

9.01(1)(d) assistance with development of and advocacy for supportive, inclusive and rigorous learning environments that honor students' diversity; and

9.01(1)(e) training in the legal and ethical obligations of school leaders to support the diverse learning needs of all students.

9.01(2) Effective induction programs must include opportunities for inductees to:

9.01(2)(a) enhance their performance according to the quality standards in section 6.00 of these rules by providing through mentors and other professionals;

9.01(2)(a)(i) orientation to the profession;

9.01(2)(a)(ii) technical skill development;

9.01(2)(a)(iii) professional networking;

9.01(2)(a)(iv) school improvement planning;

9.01(2)(a)(v) leadership development; and

9.01(2)(b) support the application of effective, research-based teaching practices in an emotionally, intellectually and physically safe learning environment.

9.01(3) Effective induction programs must:

9.01(3)(a) train site administrators in the Colorado academic standards adopted by the State Board pursuant to section 22-7-1005, C.R.S. and the principal and administrator quality standards adopted by the State Board pursuant to section 22-9-105.5, C.R.S.;

9.01(3)(b) establish standards for the selection and training of mentors who work with inductees, ensuring that mentors:

9.01(3)(b)(i) have demonstrated leadership and effectiveness as a school principal or district administrator;

9.01(3)(b)(ii) have a deep understanding and knowledge of the Principal Quality Standards;

9.01(3)(b)(iii) exhibit well-developed interpersonal skills, including the ability to empathize with others, listen and question effectively and explore multiple solutions to problems;

9.01(3)(b)(iv) are effective communicators in both oral and written form; and

9.01(3)(b)(v) have a contextual awareness of the political, social and practical realities of the inductee.

9.01(3)(c) establish a process for matching mentors with inductees;

9.01(3)(d) implement a staff development plan to provide mentors with ongoing professional learning and support for their mentoring activities which includes:

9.01(3)(d)(i) skills development as a mentor and coach;

9.01(3)(d)(ii) training in how to support inductee development in the knowledge and skills required in the Quality Standards;

9.01(3)(d)(iii) training in providing effective, growth-producing feedback; and

9.01(3)(e) ensure, when possible that mentors do not serve as evaluators of inductees, if possible.

9.01(3)(e)(i) If mentors are to be involved in such evaluations, policies must state the specific roles and responsibilities of the mentor in evaluations and provide training for mentors in those roles.

9.04 Effective induction programs should:

9.04(1) utilize needs assessments to identify specific needs and design appropriate programming for inductees;

9.04(2) promote a sequential learning plan for inductees based on current level of knowledge and skills; and

9.04(3) engage in annual program review with all stakeholders to promote systemic change and continuous improvement.

10.00 Denial, Suspension, Revocation, or Annulment of Licenses and School District Reporting Requirements

This section establishes a procedure for processing adverse information, which may result in the State Board seeking denial, suspension, revocation or annulment of licenses, including lifetime certificates, endorsements and authorizations. It establishes standards against which said adverse information may be judged. This section also provides due process protections for license-holders and applicants and specifies requirements for school districts' reports to the Department on employee misconduct. For the purpose of this section, "license" means any license, certificate, authorization or endorsement issued by the Department on or after July 1, 1994, pursuant to section 22-60.5-101, C.R.S., and any certificate, letter of authorization, or endorsement issued by the Department on or before June 30, 1994, pursuant to section 22-60-101, C.R.S.

10.00(1) A license may be denied, annulled, suspended or revoked by the State Board of Education in accordance with the State Administrative Procedures Act, sections 24-4-101 through 107, C.R.S., in the following circumstances:

10.00(1)(a) If the applicant obtained or attempts to obtain the license through misrepresentation, fraud, misleading information or an untruthful statement submitted with the intent to misrepresent, mislead or conceal the truth;

10.00(1)(b) If the Department mistakenly issued the license and it is subsequently determined that the holder is not entitled to the license due to a failure to meet educational or non-educational requirements in effect when the license was issued;

10.00(1)(c) When the applicant or holder is or has ever been convicted of, pleads or has ever pled nolo contendere to, or receives or has ever received a deferred sentence for a violation of any one of the following offenses:

10.00(1)(c)(i) contributing to the delinquency of a minor, as described in section 18-6-701, C.R.S.;

10.00(1)(c)(ii) a misdemeanor, the underlying factual basis of which has been found by the court on the record to involve domestic violence, as defined in section 18-6-800.3 (1), C.R.S., and the conviction is a second or subsequent conviction for the same offense;

10.00(1)(c)(iii) misdemeanor sexual assault, as described in section 18-3-402, C.R.S.;

10.00(1)(c)(iv) misdemeanor unlawful sexual conduct, as described in section 18-3-404, C.R.S.;

10.00(1)(c)(v) misdemeanor sexual assault on a client by a psychotherapist, as described in section 18-3-405.5, C.R.S.;

10.00(1)(c)(vi) misdemeanor child abuse, as described in section 18-6-401, C.R.S.;

10.00(1)(c)(vii) a crime under the laws of the United States, another state, a municipality of this state or another state, or any territory subject to the jurisdiction of the United States, the elements of which are substantially similar to one of the offenses described in this paragraph (d); or

10.00(1)(c)(viii) a misdemeanor committed under the laws of the United States, another state, a municipality of another state or any territory subject to the jurisdiction of the United States, the

elements of which are substantially similar to sexual exploitation of children as described in section 18-6-403(3)(b.5), C.R.S.;

10.00(1)(d) When the applicant or holder is or has ever been found guilty of, or pleads or has ever pled guilty or nolo contendere to, a misdemeanor violation of any law of this state or another state, any municipality of this state or another state, or the United States or any territory subject to the jurisdiction of the United States involving the illegal sale of controlled substances, as defined in section 18-18-102(5), C.R.S.;

10.00(1)(e) When the applicant or holder is or has ever been found guilty of a felony, other than a felony described in section 10.00(2) of these rules, or upon the court's acceptance of a guilty plea or a plea of nolo contendere to a felony, other than a felony described in section 10.00(2) of these rules, in this state or under the laws of any other state, the United States or any territory subject to the jurisdiction of the United States, of a crime which, if committed within this state, would be a felony, other than a felony described in section 10.00(2) of these rules, when the commission of said felony, in the judgment of the State Board of Education, renders the applicant or holder unfit to perform the services authorized by his or her license;

10.00(1)(f) When the applicant or holder has ever received a disposition or an adjudication for an offense involving what would constitute a physical assault, a battery or a drug-related offense if committed by an adult and if the offense was committed within the 10 years preceding the date of the license application;

10.00(1)(g) When the applicant or holder is or was charged with having committed a felony or misdemeanor and forfeits or has ever forfeited any bail, bond or other security deposited to secure his or her appearance; pays or has ever paid a fine; enters or has ever entered a plea of nolo contendere; or receives or has ever received a deferred or suspended sentence imposed by the court for any offense described in sections 10.00(2)(a), (b), or (d) of these rules;

10.00(1)(h) Notwithstanding any provision of section 10.00(2) of these rules to the contrary, when the State Board of Education determines an applicant or holder who held a license prior to June 6, 1991, has ever been convicted of an offense described in sections 10.00(2)(a)-(c) of these rules, unless the applicant or holder was previously afforded the rights set forth in section 22-60.5-108, C.R.S., with respect to the offense and the applicant or holder received or retained his or her license as a result;

10.00(1)(i) When the holder, without good cause, resigns or abandons his or her contracted position with a school district without giving written notice to the employing local board of education of his or her intent to terminate his or her employment contract for the succeeding academic year at least 30 days prior to the commencement of the succeeding academic year or the commencement of services under his or her employment contract or without giving written notice to the employing local board of education of his or her intent to terminate his or her employment contract for the current academic year at least 30 days prior to the date he or she intends to stop performing the services required by the employment contract. In this case, the license may be suspended;

10.00(1)(j) When the State Board of Education finds and determines that the applicant or holder is or has ever been professionally incompetent as described in section 10.01 of these rules;

10.00(1)(k) When the State Board of Education finds and determines that the applicant or holder is or has ever been guilty of unethical behavior as described in section 10.02 of these rules; or

10.00(1)(l) When the State Board of Education finds and determines that the license-holder knowingly and intentionally failed to protect student data pursuant to section 22-1-123, C.R.S. In this case, the license may be suspended or revoked for a period not less than 90 days.

10.00(2) A license must be denied, annulled, suspended or revoked by the State Board of Education in accordance with the State Administrative Procedures Act, sections 24-4-101 through 107, C.R.S., in the following circumstances:

10.00(2)(a) A license must be denied, suspended or revoked when the applicant or holder is or has ever been convicted by a jury verdict, by entry of a verdict, by acceptance of a guilty plea or a plea of nolo contendere by a court of:

10.00(2)(a)(i) felony child abuse, as specified in section 18-6-401, C.R.S.;

10.00(2)(a)(ii) a crime of violence, as defined in section 18-1.3-406, C.R.S.;

10.00(2)(a)(iii) a felony offense involving unlawful sexual behavior, as defined in section 16-22-102(9), C.R.S.;

10.00(2)(a)(iv) a felony, the underlying factual basis of which has been found by the court on the record to include an act of domestic violence, as defined in section 18-6-800.3, C.R.S.;

10.00(2)(a)(iv)(A) This ground for mandatory denial, suspension or revocation of a license only applies for a period of five years following the date the offense was committed, provided the applicant or holder has successfully completed any domestic violence treatment required by the court; or

10.00(2)(a)(v) a felony offense in another state, the United States or territory subject to the jurisdiction of the United States, the elements of which are substantially similar to the elements of one of the offenses described in this section 10.00(2)(a).

10.00(2)(b) A license must be denied, suspended or revoked when the applicant or holder is or has ever been convicted by a jury verdict, by entry of a verdict, or by acceptance of a guilty plea or a plea of nolo contendere by a court of indecent exposure, as described in section 18-7-302, C.R.S., or of a crime under the laws of another state, a municipality of this or another state, the United States or a territory subject to the jurisdiction of the United States, the elements of which are substantially similar to the offense of indecent exposure described in this section 10.00(2)(b).

10.00(2)(c) A license must be denied, suspended or revoked when the applicant or holder receives or has ever received a disposition or an adjudication for an offense that would constitute felony unlawful sexual behavior, as defined in section 16-22-102(9), C.R.S., if committed by an adult.

10.00(2)(d) A license must be denied, suspended or revoked if the applicant or holder is or has ever been convicted by a jury verdict, by entry of a verdict, or by acceptance of a guilty plea or a plea of nolo contendere by a court of a felony drug offense described in section 18-18-401, et seq., C.R.S., and committed on or after August 25, 2012, or is convicted of an offense under the laws of another state, the United States, or any territory subject to the jurisdiction of the United States, committed on or after June 11, 2021, the elements of which are substantially similar to a felony drug offense described in part 4 of article 18 of title 18, C.R.S.

10.00(2)(d)(i) This requirement for denial, suspension or revocation of a license only applies for a period of five years following the date the offense was committed.

10.00(2)(e) A license must be denied, suspended or revoked when the applicant or holder fails to submit his or her fingerprints taken by a qualified law enforcement agency, an authorized employee of a school district or Board of Cooperative Services using fingerprinting equipment that meets the Federal Bureau of Investigation image quality standards, or any third party approved by the Colorado Bureau of Investigation to the Department within 30 days after receipt of the Department's written request for fingerprints, which fingerprint submission the Department required upon finding probable cause to believe

that the applicant or holder had been convicted of a felony or misdemeanor, other than a misdemeanor traffic offense or traffic infraction, subsequent to his or her licensure.

10.00(2)(f) A license must be denied, suspended or revoked when the applicant or holder is determined to be mentally incompetent by a court of competent jurisdiction and a court enters, pursuant to section 15-14-301, et seq.; 15-14-401, et seq.; 27-65-109(4); or 27-65-127, C.R.S., an order specifically finding that the mental incompetency is of such a degree that the applicant or holder is incapable of continuing to perform his or her job. In this circumstance, no hearing is required to deny, annul, suspend or revoke the license, notwithstanding section 22-60.5-108, C.R.S.; denial, annulment, suspension or revocation happens by operation of law after the Department gives reasonable notice to the applicant or license-holder.

10.00(3) The State Board of Education may take immediate action to deny, annul or suspend a license without a hearing, notwithstanding the provisions of section 22-60.5-108, C.R.S., upon receipt of a certified copy of the judgment of conviction, a deferred sentence or the acceptance of a guilty plea or a plea of nolo contendere for any violation of sections 10.00(1)(c)-(e) of these rules or upon receipt of a certified copy of the judgment of conviction or the acceptance of a guilty plea or a plea of nolo contendere for any violation of sections 10.00(2)(a)-(d) of these rules. The State Board of Education may revoke a suspended license based on a violation of sections 10.00(1)(c)-(e) of these rules and must revoke a suspended license based on a violation of sections 10.00(2)(a)-(d) of these rules without a hearing and without any further action after the exhaustion of all appeals, if any, or after the time for seeking an appeal has elapsed and upon the entry of a final judgment. A certified copy of the judgment of a court of competent jurisdiction of a conviction, a deferred sentence or the acceptance of a guilty plea or a plea of nolo contendere is conclusive evidence of such conviction or plea for the purposes of sections 10.00(1)(c)-(e) of these rules. A certified copy of the judgment of a court of competent jurisdiction of a conviction or the acceptance of a guilty plea or a plea of nolo contendere is conclusive evidence of such conviction or plea for the purposes of sections 10.00(2)(a)-(d) of these rules.

10.00(4) In cases where the State Board of Education deems summary suspension is appropriate, pursuant to section 24-4-104(4), C.R.S., proceedings for suspension or revocation may be instituted upon the Board's own motion without a proceeding pursuant to these regulations. The holder is entitled to a post-deprivation hearing consistent with section 24-4-105, C.R.S. At such hearing, the burden of proof rests with the license-holder.

10.01 Standards of Professional Incompetence

The following serve as standards against which charges of professional incompetence will be judged. To warrant denial, annulment, suspension or revocation of the license, violations must be found to be substantial or continued, as well as related to services rendered within the scope of the license. It is considered professional incompetence for a license-holder or applicant to:

10.01(1) willfully depart or to have ever willfully departed from the quality standards described in sections 5.00 or 6.00 of these rules;

10.01(2) willfully fail or to have ever willfully failed to practice with reasonable skill and safety;

10.01(3) act or to have ever acted in a manner evidencing a clear and substantial lack of knowledge, ability or fitness to perform the services rendered within the scope of the license;

10.01(4) refuse or to have ever refused to perform duties required by federal and state law and regulation;

10.01(5) recklessly disregard or to have ever recklessly disregarded duties required by federal and state law and regulation;

10.01(6) have or to have ever had a mental or physical condition, as diagnosed by a professional competent to make such a diagnosis, that results in the license-holder's or applicant's inability to satisfactorily perform required duties, subject to the American with Disabilities Act of 1990, Section 504 of the Rehabilitation Act of 1973, and other nondiscrimination law; or

10.01(7) habitually abuse or to have ever habitually abused alcoholic, narcotic, hypnotic or other substances, the abuse of which results in the license-holder's or applicant's inability to satisfactorily perform required duties, subject to the American with Disabilities Act of 1990, Section 504 of the Rehabilitation Act of 1973, and other nondiscrimination law.

10.02 Standards of Unethical Behavior

The following serve as standards against which charges of unethical behavior will be judged. To warrant denial, annulment, suspension or revocation of the license, violations must be found to be substantial or continued. It is considered unethical behavior for a license-holder or applicant to:

10.02(1) fail or to have ever failed to make reasonable effort to protect a minor from conditions harmful to health and safety;

10.02(2) provide or to have ever provided professional services in a discriminatory manner regarding age, gender, gender identity, sexual orientation, national origin, race, ethnicity, color, creed, religion, language, disability, socio-economic status or marriage status;

10.02(3) fail or to have ever failed to keep in confidence information obtained in the course of professional services, unless disclosure serves to protect the child, other children or school personnel is required by law;

10.02(4) direct or to have ever directed a person to carry out professional responsibilities knowing that such person is not qualified for the responsibility given, except for assignments of short duration in emergency situations;

10.02(5) deliberately distort or suppress or to have ever deliberately distorted or suppressed curricular materials or educational information in order to promote their own personal view, interest or goal;

10.02(6) falsify or misrepresent or to have ever falsified or misrepresented records or facts relating to the license-holder or applicant's qualifications, another educator's qualifications or a student's records;

10.02(7) make or to have ever made false or malicious statements about students or school personnel;

10.02(8) using one's position for personal gain;

10.02(9) fail or to have ever failed to conduct financial transactions relating to the school program in a manner consistent with applicable law, rule or regulation;

10.02(10) engage or to have ever engaged in immoral conduct that affects the health, safety or welfare of children; conduct that offends the morals of the community; or conduct that sets an inappropriate example for children or youth whose ideals the educator is expected to foster and elevate;

10.02(11) engage or to have ever engaged in unlawful distribution or sale of dangerous or unauthorized prescription drugs or other dangerous nonprescription substances, alcohol or tobacco; or

10.02(12) engage or to have ever engaged in a sexual act, meaning sexual contact, sexual intrusion or sexual penetration as defined in section 18-3-401, C.R.S., with a student enrolled at the school where the

license-holder or applicant is or was employed at the time of the sexual act, including a student who is eighteen years of age or older, regardless of whether the student consented to the sexual act.

10.03 Filing of Adverse Information Regarding an Educator License

10.03(1) Filing of external complaints:

10.03(1)(a) A complaint regarding an educator is a formal statement, filed by an aggrieved party or a party in interest against an individual who holds or has applied for an educator license, of an alleged violation of conditions that, if found to be substantial or continued, and if found to be true, becomes grounds for denying, annulling, revoking or suspending the license. The Department must supply necessary complaint forms and information for the filing of adverse information.

10.03(1)(b) The complainant must personally deliver, send by mail or send in a secured electronic environment the complaint to the Department. The complainant must sign and swear to the complaint, regardless of delivery method. The complaint must allege actions serving as the basis of the complaint, and the alleged actions must be substantial or continued. The complaint must specify the statutory and regulatory violations.

10.03(2) Filing of notification by public district/school:

10.03(2)(a) The local board of education, charter school, BOCES or its designee must notify the Department pursuant to the requirements of section 10.05 of these rules.

10.03(3) Conducting investigations and pursuing formal action by the State Board of Education:

10.03(3)(a) The Department conducts background investigations upon receipt of any adverse information. The purpose of this inquiry is to determine if there is probable cause to seek annulment, revocation or suspension of the license or denial of the application. If the Department determines probable cause exists, the Department may ask the State Board of Education to direct the initiation of formal proceedings against the license-holder pursuant to section 22-60.5-108, C.R.S., or to deny the application pursuant to section 24-4-104(8), C.R.S.

10.03(3)(b) Except in cases of summary suspension, the Department must provide the license-holder or applicant notice of the allegations against him or her and an opportunity to respond prior to asking the State Board of Education to deny an application or initiate formal proceedings. The Department must provide such an opportunity by sending a formal written letter of inquiry by first-class mail to the applicant or license holder, explaining the allegations, requesting a response within 20 days, and notifying them of their right to return a response within 20 days. If the Department knows that the person is an employee of a Colorado charter school, BOCES or school district, the Department must notify the charter school, BOCES or school district of the inquiry.

10.03(3)(c) After the expiration of the 20-day response period or upon receipt of the response, whichever is sooner, the Department will review the allegations and response and determine whether to pursue the charges for denial, revocation or annulment of the license. In any case where, based on the response, the Department determines probable cause does not exist, the Department must withdraw or dismiss the complaint and notify the person complained against and the school district, charter school or BOCES of the Department's action. Any handling of the complaint must be consistent with the laws on confidentiality unless contrary to statute.

10.03(3)(d) The Department is authorized to grant extensions to any of the processing deadline dates in sections 10.03(3)-(4) of these rules, based upon sufficient cause shown.

10.03(3)(e) The Department will present its findings and recommendations to the State Board of Education for action.

10.03(3)(e)(i) If the Department recommends revocation or annulment and the State Board of Education accepts that recommendation, the Board must refer the matter for a hearing in accordance with section 24-4-105, C.R.S. The Department must notify by first-class mail the person charged of the State Board of Education's decision to refer the matter for a hearing. If the State Board of Education rejects the Department's recommendation, the Department must dismiss the complaint and notify the person complained against and the complainant of the Department's action. Any handling of the complaint must be consistent with the laws on confidentiality unless contrary to statute.

10.03(3)(e)(ii) If the Department recommends denial and the State Board of Education accepts that recommendation, the Department must notify by first-class mail the applicant of the denial and the applicant's right to request a hearing conducted in accordance with section 24-4-105, C.R.S. If the State Board of Education rejects the Department's recommendation, the Department must clear the application and issue the credential to the applicant.

10.03(3)(f) If the State Board of Education refers the matter for a hearing and if the Department knows that the person charged is a current employee of a Colorado charter school, BOCES or school district, the Department must notify such school, BOCES or school district of the State Board of Education's decision.

10.03(3)(g) If the State Board of Education refers the matter for a hearing, or if the applicant timely requests a hearing concerning the Board's denial of his or her application, the hearing and subsequent proceedings must be conducted by an administrative law judge appointed by the Colorado Division of Administrative Hearings in accordance with section 24-4-105(3), C.R.S..

10.03(3)(h) Pursuant to section 24-4-105(14), C.R.S., the decision of the administrative law judge must include a statement of findings and conclusions and the appropriate order, sanction, relief or denial thereof. If the administrative law judge sustains the charge, the decision must result in revocation or denial of the license.

10.04 Application for License Following Suspension, Revocation, Annulment, or Denial

10.04(1) A license-holder whose license has been suspended or revoked may submit an application for a new license, the renewal of the expired license, or the reinstatement of the license to the Department and for review by the State Board of Education. The application must include justification for license issuance, renewal or reinstatement, with evidence as to rehabilitation appropriate to the basis for the prior suspension or revocation. The application must demonstrate the current fitness of the applicant to resume educational duties, in accordance with all laws and rules. The burden of proof rests with the applicant.

10.04(1)(a) The reinstated license will bear the same expiration date as had been originally issued.

10.04(1)(b) In the event the original license expired during the period of suspension or revocation, the applicant will be required to meet all requirements for the renewal of the license.

10.04(2) An applicant whose license application has been denied or annulled by the State Board of Education may apply for a license to the Department and for review by the State Board. The application will include justification for issuance, with appropriate supporting documentation as to the current fitness of the applicant to resume educational duties, in accordance with all laws and rules. The burden of proof must rest with the applicant.

10.05 Mandatory Reporting of Misconduct

10.05(1) The local board of education, charter school, BOCES or designee must notify the Department within 10 business days of any employee's dismissal or resignation if the dismissal or resignation is based on an allegation of unlawful behavior involving a child, including unlawful sexual behavior or allegation of a sexual act (meaning sexual contact, sexual intrusion or sexual penetration as those terms are defined in section 18-3-401, C.R.S.) involving a student who is eighteen years of age or older, regardless of whether the student consented to the sexual act, that is supported by a preponderance of the evidence. The local board, charter school, BOCES or designee must provide any information requested by the Department concerning the circumstances of the dismissal or resignation.

10.05(2) The local board of education, charter school, BOCES or designee must immediately notify the Department when any employee's resignation or dismissal is based upon a conviction, guilty plea, plea of nolo contendere or deferred sentence as set forth in sections 10.00(1)(d)-(g) and 10.00(2)(a)-(c) of these rules. The local board, charter school, BOCES or designee must provide any information requested by the Department concerning the circumstances of the employee's dismissal or resignation.

10.05(3) The local board of education, charter school, BOCES or designee must notify the Department when the county department of social services or local law enforcement agency reasonably believes that an incident of abuse or neglect has occurred and an employee of the district, charter school or BOCES is the suspected perpetrator and was acting in his or her official capacity as an employee. The local board, charter school, BOCES or its designee must provide any information requested by the Department concerning the employee's alleged abuse or neglect.

10.05(4) The local board of education, charter school, BOCES or designee must notify the Department when it reasonably believes that one of its employees is guilty of unethical behavior or professional incompetence as set forth in sections 10.01 and 10.02 of these rules. The local board, charter school, BOCES or its designee must provide any information requested by the Department concerning the employee's behavior or competence.

10.05(5) The local board of education, charter school, BOCES or designee must notify the Department when it learns from a source other than the Department that a current or past employee has been convicted of, has pled nolo contendere to or has received a deferred sentence or deferred prosecution for a felony or a misdemeanor crime involving unlawful sexual behavior or unlawful behavior involving children.

10.06 Mandatory Disclosure of Attempts to Seal Criminal Records

An applicant or license-holder who files a petition to seal a criminal record under § 24-72-701, et seq., C.R.S., must notify the Department of the pending petition to seal. The Department may inquire into the facts of the criminal offense(s) for which the petition to seal is pending under § 24-72-703(2)(d)(III), C.R.S. The applicant or license-holder does not have any right to privilege or privilege that justifies refusal to answer the Department's questions about the criminal offense(s) at issue in the petition to seal.

11.00 Standards for the Approval of Educator Preparation Programs

The Department will review, authorize, and approve educator preparation programs at Colorado public, private and proprietary institutions of higher education based on the identified requirements for approval under section 22-60.5-121~~23-1-121(2) & (3)~~, C.R.S.

The Department's Educator Talent Division promotes high-quality programs that meet the requirements, policies and the best practices identified by the Department of Education and Department of Higher Education pursuant to sections 22-2-109, C.R.S., 22-60.5-121, C.R.S. and 23-78-104, C.R.S.

Commented [KT7]: Revised per 22-60.5-121, C.R.S.

Pursuant to ~~22-60.5-121, 2-499~~, C.R.S and the standards set forth in sections 5.00 and 6.00 of these rules and sections 4.00 through 7.00 of 1 CCR 301-101, the State Board of Education will review all educator preparation programs, including traditional and alternative programs, to ensure that each program meets the minimum requirements in § 22-60.5-121, C.R.S., rules 11 and 13 of these rules, and that the programs are implemented in a way that enables educator candidates to meet the quality standards for the applicable license and requirements for licensure endorsement.

Commented [JZ8]: See section 22-60.5-121(4)(b).

~~the Department's responsibility as outlined in sections 22-60.5-205(3), 22-60.5-305.5(6), and 22-60.5-111(14), C.R.S. Sections 12.00 and 13.00 of these rules provide the requirements for authorization of alternative teacher programs.~~

~~11.01(1)(a) for all teacher candidates in elementary, early childhood and all special education programs, concentrated focus on foundational reading skills—specifically phonemic awareness, phonics, vocabulary, fluency and comprehension, per 23-1-121(2)(c.5), C.R.S.;~~

~~11.01(1)(b) for all teacher candidates in an initial licensure program, behavioral health training including culturally responsive and trauma-informed practices.~~

~~11.01(1)(c) for all educator candidates, education and training on federal and state regulations and policies related to students with exceptional needs, including, but not limited to, Americans With Disabilities Act of 1990, Rehabilitation Act of 1973 and Individuals With Disabilities Education Act; and~~

~~11.01(1)(d) for all educator candidates, pedagogical instruction in high-quality practices for face-to-face, blended and online learning.~~

11.012 Program Review by the Department's Educator Talent Division

~~The Department's Educator Talent Division will evaluate all new and established educator preparation programs for consistency with these rules and with the State Board of Education approved rules 1 CCR 301-101. The Division will assess the content of these programs based on sections 22-2-109(5) and 22-60.5-121, C.R.S. The purpose of the evaluation and approval process is to assure the public that educators who complete educator preparation programs in the state of Colorado are well-prepared to educate PreK-12 students according to the Colorado Revised Statutes, the rules set forth by the State Board of Education, and the Colorado Academic Standards. Educator preparation programs must prepare candidates to meet or exceed the standards for licensure specified in sections 5.00 and 6.00 of these rules and the corresponding standards in sections 4.00 through 7.00 of 1 CCR 301-101, including demonstration of professional competencies and depth of content knowledge required by state board rule.~~

~~11.012(1) The Educator Talent Division's review of program review content must ensure that each program is designed and implemented in a manner that will enable a candidate to meet licensure and endorsement requirements. Rule outlined below apply to both educator preparation programs at institutionse of higher education and alternative preparation programs.~~

~~11.012(2) For the reauthorization of educator preparation programs at Colorado's public, private or proprietary postsecondary institutions of higher education recognized by the Colorado Department of Higher Education, the Educator Talent Division will provide the State Board of Education information for its consideration as to whether the Board should issue an recommend to CCHE approval, conditional approval, probation or termination.~~

~~11.012(3) For alternative teacher programs and alternative principal programs, the State Board of Education will determine full reauthorization, conditional reauthorization, probationary reauthorization or termination of the program.~~

11.012(3)(a) An on-site evaluation for the reauthorization of alternative preparation programs will occur no more frequently than once every five years.

11.012(3)(b) An initial site visit and review will be conducted 12 to 24 months after approval for all newly authorized alternative preparation programs.

12.00 Alternative Teacher Programs

The following must serve as standards for the initial and continuing approval of alternative teacher preparation programs. School districts, BOCES, accepted institutions of higher education, non-profit organizations, nonpublic schools, charter schools, the institute or any combination thereof may apply to the State Board of Education for approval as a designated agency of an alternative teacher program under section 22-60.5-205, C.R.S.

12.00(1) An alternative teacher program must:

12.00(1)(a) be a one-year or two-year teacher preparation program for persons of demonstrated knowledge and ability who hold an alternative teacher license or interim authorization pursuant to section 22-60.5-111(7), C.R.S.:

12.00(1)(a)(i) a one-year program shall be designed to be completed in one year. The program may be extended for one additional year based on documentation of unforeseen circumstances, as demonstrated by the applicant and the designated agency and approved by the Department;

12.00(1)(a)(ii) a two-year program shall be designed to be completed in two years; and

12.00(1)(a)(iii) provide for a person being alternatively prepared as a special education generalist to be employed as an alternative teacher for a maximum of three years.

12.00(1)(b) be the responsibility of a designated agency. The agency's duties include the organization, management and operation of the program as follows:

12.00(1)(b)(i) the designated agency must establish an advisory council, which must include, at a minimum, representatives from participating school districts, charter schools, nonpublic schools, the institute or BOCES; at least one qualified mentor teacher; and a representative from any accepted institution of higher education cooperating with the designated agency, if applicable. Representatives on the advisory council must reflect the geographic make-up of the designated agency if the agency is composed on more than one entity.

12.00(1)(c) require alternative teachers to be employed by or have a clinical agreement in place with a school district, a licensed nonpublic childcare or other preschool facility, charter school, the Charter School Institute, nonpublic school or BOCES to teach, receive training and be supervised by a qualified mentor teacher and an appropriate support team as follows:

12.00(1)(c)(i) alternative teachers must demonstrate competency in their subject area endorsement and/or assignment pursuant to section 3.00 of these rules including:

12.00(1)(c)(i)(A) if the alternative teacher is asked to teach in any content area(s) outside of his/her assessed content area, the school or school district is required to keep on file documented evidence that the alternatively licensed teacher has completed 24 semester hours of applicable coursework with a minimum average grade of B- in the additional content area(s) or the equivalent thereof, or has passed the related approved content area test(s);

12.00(1)(c)(ii) training of alternative teachers must include 225 clock-hours of planned instruction, and activities must include, but not be limited to, teacher preparation courses that meet the Teacher Quality Standards and English Language Learner Quality Standards.

12.00(1)(c)(iii)(A) The 225 clock-hours must, at a minimum, include professional development that addresses dropout prevention and the standards as outlined in section 5.00 of these rules;

12.00(1)(c)(iii)(B) The hours of required instruction and activities may be modified by the alternative teacher's support team, but only after a documented and performance-based evaluation of the candidate's proficiency determines that one or more of the program's requirements has already been met by the alternative teacher's proven knowledge or past experience;

12.00(1)(c)(iii)(C) Evaluations of alternative teachers must be conducted and documented in accordance with section 22-9-106, C.R.S.;

12.00(1)(c)(ii)(D) Early childhood education programs must align to the standards outlined in section 4.01 of 1 CCR 301-101, and elementary and special education programs must align to the standards outlined in section 4.02 of 1 CCR 301-101; and

12.00(1)(c)(ii)(E) The training must address special education regulations as outlined in 22-60.5-205, C.R.S.

12.00(2) Proposals submitted by entities for authorization as designated agencies of alternative teacher preparation must include, but not be limited to:

12.00(2)(a) demonstrated evidence of a need for the proposed program;

12.00(2)(b) evidence of the establishment of an advisory council by the designated agency;

12.00(2)(c) a listing of the advisory council's duties, which must include but need not be limited to: providing the designated agency with information regarding the organization and management and operation of the approved alternative teacher program;

12.00(2)(d) criteria for the selection of mentor teachers which must include but need not be limited to: evidence of exemplary teaching and school leadership; the ability to model and counsel the alternative teacher; relevant mentorship coursework; and a valid teacher license and endorsement in the alternatively licensed teacher's content area if available. A mentor teacher endorsement is not required.

12.00(2)(d)(i) Mentor teachers may evaluate alternative teachers if trained in accordance with 22-9-106(4), C.R.S., except that mentor teachers are not required to hold a principal or administrator license.

12.00(2)(d)(ii) If a mentor teacher is not available, the designated agency may submit a plan for mentor support that provides that same level of mentorship to the alternative teacher.

12.00(2)(e) an articulated, mandatory and intensive supervision training program for mentors that provides direction with regard to structured guidance, the provision of regular ongoing support to new teachers and teacher performance evaluation;

12.00(2)(f) identification of the duties of the mentor teacher including: serving as a member of the support team; providing ongoing observation, counseling and supervision of the alternative teacher; and representing the support team for purposes of making recommendations about the alternative teacher's licensing;

12.00(2)(g) a checklist of the duties of the mentor teacher and the time required of that teacher to mentor the alternative teacher. The designated agency must keep this checklist on file.

12.00(2)(h) provisions made by the designated agency to assist the mentor teacher in properly discharging his/her regular duties. Such provisions may include:

12.00(2)(h)(i) providing a substitute teacher for the mentor teacher, as necessary and appropriate; and

12.00(2)(h)(ii) allowing for adequate compensatory time and/or other compensation for the mentor teacher's required planning and observation schedule and ongoing regular conferences with the alternative teacher.

12.00(2)(i) the composition of an alternative teacher's support team. The team must include, at a minimum, the alternative teacher's mentor, the building principal and a representative of the approved designated agency;

12.00(2)(j) identification of the duties of the support team including:

12.00(2)(j)(i) meeting on a regular schedule with an agenda. Documentation of such regularly scheduled meetings must include evidence of the alternative teacher's progress toward meeting the program's objectives;

12.00(2)(j)(ii) evaluating the related prior education and experience of the alternative teacher to determine the appropriate program elements which will prepare the candidate for full licensure;

12.00(2)(j)(iii) developing the instruction plans and activities for the alternative teacher's preparation. The programming must meet the State Board of Education approved standards, as prescribed in section 5.00 of these rules; and

12.00(2)(j)(iv) prior to the beginning of the program, providing the alternative teacher with an orientation to the school, its student population, the policies and procedures which affect teaching; classroom management strategies and the teacher's responsibilities, as prescribed by section 12.00(1)(c) of these rules.

12.00(2)(k) an assurance that the major portion of the alternative teacher's assignment will be in the content area in which the alternative teacher has been approved by the state under section 3.12(1)(c);

_____ 12.00(2)(l) explanation of how the entity employing the alternative teacher meets the requirements in section 12.00(1)(c)(i)(A) of these rules if it asks the alternative teacher to teach outside of his/her approved content area;

_____ 12.00(2)(m) the method of evaluation of the alternative teacher's proficiencies using performance evaluations, as based on the Teacher Quality Standards and as prescribed by section 5.00 of these rules;

_____ 12.00(2)(n) an inventory of Teacher Quality Standards for each alternative teacher in its program that documents how the alternative teacher demonstrates proficient knowledge and understanding of the standards and the English Language Leader Quality Standards;

_____ 12.00(2)(o) a schedule of mentor and principal observations, including a minimum of four alternative teacher observations by program leaders;

_____ 12.00(2)(p) the process by which performance evaluations of alternative teachers will be conducted, which must be consistent with the provisions of section 22-9-106, C.R.S.; and

_____ 12.00(2)(q) measurable objectives for the alternative teacher's preparation program.

12.00(3) When an entity is approved and offers a new educator preparation program, the Department may review the new educator preparation program no sooner than twelve months but not more than twenty-four months after the new preparation program is initially approved. The alternative teacher program may be approved for up to five years. An onsite evaluation will be conducted no more than once every five years for purposes of reauthorization.

12.00 Educator Preparation Programs The Department's Educator Talent Division promotes high-quality programs that meet the requirements, policies and the best practices identified by the Department of Education and Department of Higher Education pursuant to sections 22-2-109, C.R.S., 22-60.5-121, C.R.S., and 23-78-104, C.R.S.

11.02 Standards for Educator Preparation Programs and Alternative Preparation Programs

The following must serve as standards for the initial and continuing approval of all preparation programs.

11.2034(1) An educator preparation program and an alternative program must:

Commented [KT9]: Per 22-60.5-121, C.R.S.

11.02(1)(a) Be designed around candidate proficiency and professionalism that supports decision-making about partnerships and the integration of curricula, learners, coursework and clinical experience;

11.02(1)(b) Map, plan, develop, assess and support candidate proficiency, including

11.02(1)(b)(i) a candidate's deep understanding of content knowledge, pedagogical knowledge, the content knowledge required for educating students and the dispositions and professional qualities necessary to be a successful educator;

11.02(1)(b)(ii) comprehensive, ongoing assessment including evaluation of each candidate's subject matter (as outlined in the endorsement standards in sections 4.00 through 7.00 of 1 CCR 301-101) and professional knowledge and ability to demonstrate skill in applying the professional knowledge base (as outlined in the quality standards specified in sections 5.00 and 6.00 of these rules); and

11.02(1)(b)(iii) pedagogical instruction in high-quality practices for face-to-face, online and blended learning.

11.02(1)(c) Include coursework that:

11.02(1)(c)(i) provides content knowledge specific to teaching the aligned preschool through elementary and secondary education standards, pursuant to 22-7-1005, C.R.S.;

11.02(1)(c)(ii) is aligned with the Colorado READ Act (as established in 22-7-12, C.R.S.) and the foundational reading skills of phonemic awareness, phonics, vocabulary development, reading fluency, including oral skills and reading comprehension, and the skills and strategies necessary to ensure that every student learns how to read;

11.02(1)(c)(ii)(A) Reading coursework and clinical practice opportunities must be a significant focus for teachers preparing for endorsement in early childhood, elementary or special education.

11.02(1)(c)(iii) provides educator candidates with an overview of Title II of the federal "Americans With Disabilities Act of 1990," section 504 of the federal "Rehabilitation Act of 1973," the federal "Individuals With Disabilities Education Act," individualized education programs (as defined in 22-20-103(15), C.R.S.) and child find, and that teaches educators effective special education classroom practices, including, but not limited to, inclusive learning environments; and

11.02(1)(c)(iv) integrates theory and practice and educates candidates in the methodologies, practices and procedures of teaching standards-based education, and specifically the quality standards specified in 5.00 and 6.00 of these rules.

11.02(1)(d) Include intentional clinical experiences, early on and through the program, relating to predetermined state content standards that afford candidates multiple, intentional experiences to learn from practice.

11.02(1)(d)(i) Clinical experiences must be aligned with educator preparation program curricula so that candidates develop pedagogical skills and pedagogical content knowledge; and

11.02(1)(d)(i)(A) Include a minimum of 800 hours for teacher candidates;

11.02(1)(d)(i)(B) Include a minimum of 300 hours for principal and administrator candidates; and

11.02(1)(d)(i)(C) A majority of the clinical experience hours must be completed through a continuous clinical placement,

11.02(1)(d)(i)(D) For every additional endorsement or advanced degree, a candidate shall complete an appropriate amount of supervised clinical experiences related to predetermined state content standards, including best practices and relevant national norms related to the candidate's endorsement(s).

11.02(1)(d)(ii) To maximize candidates' clinical experiences, educator preparation programs must establish a formal mentor/cooperating educator selection and training process that:

11.2(1)(d)(ii)(A) selects mentors or cooperating educators based on a defined set of criteria, which must include but need not be limited to: evidence of exemplary teaching and/or school leadership; the ability to model and counsel the candidate; relevant mentorship coursework; and a valid teacher license and endorsement in the candidate's content area if available (a mentor teacher endorsement is not required);

11.02(1)(d)(ii)(B) includes a training program for mentors that provides direction with regard to structured guidance, the provision of regular ongoing support to new educators and educator performance evaluation;

11.02(1)(d)(ii)(C) identifies the duties of the mentor or cooperating educator including, as applicable: serving as a member of the support team; providing ongoing

observation, counseling and supervision; and representing the support team for purposes of making recommendations about the licensing for the individual;

11.02(1)(d)(ii)(D) provides a checklist of the duties of the mentor and the time required; and

11.02(1)(d)(ii)(E) defines provisions made by the educator preparation program to assist the mentor teacher in properly discharging their regular duties, such as:

11.02(1)(d)(ii)(E)(I) providing a substitute teacher so the mentor teacher may have release time to coach and support the mentee, as necessary and appropriate; and

11.02(1)(d)(ii)(E)(II) allowing for adequate compensatory time and/or other compensation for the mentor teacher's required planning and observation schedule and ongoing regular conferences with the alternative teacher.

11.02(1)(e) Require each teacher preparation candidate in an initial licensure program to complete at least one semester- or quarter-length course in behavioral health training and one semester- or quarter-length course in using culturally responsive and trauma- and evidence-informed practices;

11.02(1)(f) Require candidates for an elementary, middle school mathematics or secondary mathematics endorsement training in evidence-informed practices in mathematics, including interventions to help students who are below grade level or struggling in mathematics, students with disabilities and students who are English language learners;

11.02(1)(g) Require each educator preparation candidate, prior to graduation, to demonstrate the skills required for licensure;

11.02(1)(h) Engage in continuous evidence-based review cycles regarding the program's impact on candidate's development through the program, by implementing procedures for:

11.02(1)(h)(i) collecting and reviewing evaluative data concerning the preparation program and for modifying the program as necessary in response to the data collected;

11.02(1)(h)(ii) reviewing the scores achieved on professional competency demonstrations by teacher candidates enrolled in and graduating from/completing the program, and modifying the program as necessary to improve those scores; and

11.02(1)(h)(iii) engaging stakeholder feedback for program continuous improvement, including at a minimum:

11.02(1)(h)(iii)(A) processes to evaluate strengths, challenges, and improvement foci;

11.02(1)(h)(iii)(B) processes for gathering stakeholder feedback and other impact evidence from candidates, faculty, staff, partners, and others; and

11.02(1)(h)(iii)(C) for alternative programs only, establishing an advisory council, which must include, at a minimum, representatives from participating school districts, charter schools, nonpublic schools, the institute or BOCES; at least one qualified mentor teacher; and a representative from any accepted institution of higher education cooperating with the designated agency, if applicable.

11.02(1)(h)(iii)(C)(I) Representatives on the advisory council must reflect the geographic make-up of the educator preparation program if the program is composed of more than one entity; and

11.02(1)(h)(iii)(C)(II) Advisory council's duties must include but need not be limited to: providing the educator preparation program with information regarding the organization and management and operation of the approved alternative teacher program.

11.02(2) In addition to the requirements outlined in 11.02(1), traditional educator preparation programs at an approved institution of higher education must:

11.02(2)(a) Be designed to be completed within four academic years;

11.02(2)(b) Have a comprehensive admission system that includes screening of and counseling for students who are considering becoming teacher candidates; and

11.02(2)(c) Have practicing educators or faculty members regularly screen and counsel candidates.

11.02(3) In addition to the requirements outlined in 11.02(1), alternative teacher preparation programs at an approved Designated Agency must:

11.02(3)(a) be a one-year or two-year teacher preparation program for persons of demonstrated knowledge and ability who hold an alternative teacher license or interim authorization pursuant to section 22-60.5-111(7), C.R.S.:

11.2(3)(a)(i) one-year programs shall be designed to be completed in one year. The program may be extended for one additional year based on documentation of unforeseen circumstances, as demonstrated by the applicant and the designated agency and approved by the Department;

11.02(3)(a)(ii) two-year programs shall be designed to be completed in two years; and:

11.02(3)(a)(iii) provide for a person being alternatively prepared as a special education generalist to be employed as an alternative teacher for a maximum of three years;

11.02(3)(b) Ensure that alternative teachers:

11.02(3)(b)(i) are employed by or have a clinical agreement in place with a school district, a licensed nonpublic childcare or other preschool facility, charter school, the Charter School Institute, nonpublic school or BOCES to teach;

11.02(3)(b)(ii) demonstrate competency in their subject area endorsement and/or assignment pursuant to section 3.00 of these rules including:

11.02(3)(b)(ii)(A) If the alternative teacher is asked to teach in any content area(s) outside of their assessed content area, the school or school district is required to keep on file documented evidence that the alternatively licensed teacher has completed 24 semester hours of applicable coursework with a minimum average grade of B- in the additional content area(s) or the equivalent thereof, or has passed the related approved content area test(s); and

11.02(3)(b)(iii) include a minimum of 225 clock-hours of planned instruction, including, but not limited to, teacher preparation courses that meet the quality standards and English Language Learner Quality Standards, training in dropout prevention, and prepare candidates to meet the additional endorsement standards for the endorsement area sought.

11.02(3)(b)(iii)(A) Varied program length and design are allowable for programs to address differentiated clock-hours needed for alternative teacher candidates based on their endorsement area standards.

11.02(3)(c) Evaluate alternative teachers' progress in accordance with section 22-9-106, C.R.S.:

11.02(3)(c)(i) Mentor teachers may assess alternative teachers if trained in accordance with 22-9-106(4), C.R.S., except that mentor teachers are not required to hold a principal or administrator license.

11.02(3)(c)(ii) If a mentor teacher is not available, the designated agency may submit a plan for mentor support that provides that same level of mentorship to the alternative teacher.

11.02(3)(d) Include an alternative teacher support team consisting of, at a minimum, the alternative teacher's mentor, the building principal and a representative of the approved designated agency;

11.02(3)(e) Identify the duties of the alternative teacher support team including:

11.02(3)(e)(i) evaluating the related prior education and experience of the alternative teacher to determine the appropriate program elements which will prepare the candidate for full licensure;

11.02(3)(e)(ii) providing the alternative teacher with an orientation to the school, its student population, the policies and procedures which affect teaching, classroom management strategies and the teacher's responsibilities.

11.02(3)(e)(iii) ensuring the majority of the alternative teacher's assignment will be in the content area in which the alternative teacher has been approved by the department under section 3.12(1)(c);

11.02(3)(e)(iv) the method of evaluation and inventory tracking for each alternative teacher's proficiencies using performance evaluations, as based on the quality standards and as prescribed by section 5.00 of these rules; and

11.02(3)(e)(v) the schedule of mentor and principal observations, as well as a minimum of four alternative teacher observations by program leaders.

11.02(4) School districts, BOCES, accepted institutions of higher education, non-profit organizations, nonpublic schools, charter schools, the institute or any combination thereof may apply to the State Board of Education for approval as an alternative teacher preparation program under section 22-60.5-205, C.R.S.

12.02 Program Review by Department's Educator Talent Division

The Department's Educator Talent Division will evaluate all new and established educator preparation programs for consistency with these rules and with the State Board of Education approved rules 1 CCR 301-101. The Division will assess the content of these programs based on § 22-60.5-121, C.R.S. sections 22-2-109(5). The purpose of the evaluation and approval process is to assure the public that educators who complete educator preparation programs in the state of Colorado are well-prepared to educate PreK-

12 students according to the Colorado Revised Statutes, the rules set forth by the State Board of Education, and the Colorado Academic Standards. Educator preparation programs must prepare candidates to meet or exceed the standards for licensure specified in sections 5.00 and 6.00 of these rules and the corresponding standards in sections 4.00 through 7.00 of 1 CCR 301-101, including demonstration of professional competencies and depth of content knowledge.

11.03 Authorization of New Educator Preparation Programs and Alternative Preparation Programs

11.03(1) Proposals submitted to the Department by entities for authorization by the State Board of Education as approved educator preparation programs and alternative preparation programs must include, but not be limited to:

11.03(1)(a) Demonstrated evidence of a need for the proposed program;

11.03(1)(b) Detailed plan to address standards outlined in section 11.02 of these rules.

11.03(2) When an entity is approved for a new educator preparation program, including alternative preparation programs, the Department may review the new educator preparation program no sooner than 12 months but no more than 24 months after the new preparation program is initially approved. The program may be approved for up to five years.

11.03(3) When an approved entity offers a new educator preparation program or significantly modifies an existing program, the entity shall submit the new or modified program to the Department for review.

11.03(4) Each approved educator preparation program, including approved programs and alternative programs, must complete required data submissions for enrollee and program completers as well as additional data as requested by the Department.

11.04 Reauthorization of Approved Programs of Educator Preparation and Alternative Programs

11.04(1) An evaluation for the reauthorization of approved programs of educator preparation and alternative programs will occur no more frequently than once every five years if they have obtained full approval at the program's last reauthorization review.

11.04(2) As part of the reauthorization process, programs:

11.04(2)(a) are responsible for providing evidence and documentation as requested by the Department, including but not limited to program design and implementation to meet standards in section 12.01 of these rules; and

11.04(2)(b) will facilitate, in collaboration with the Department, the onsite evaluation and corresponding logistics of a state review team site visit.

11.04(2)(b)(i) State review team members may include Department staff, educator preparation program leaders from other institutions, content experts, and educator leaders from Colorado schools.

11.04(2)(b)(ii) Programs are responsible for the costs associated with their reauthorization site visit to include such items as transportation, lodging, parking, and meals for the state review team.

11.04(3) Based on recommendations from the Department, the State Board of Education will determine whether a program will be approved, conditionally approved, placed on probation or terminated.

11.04(3)(a) Approval status can be for all content areas offered by a program or for individual areas the program has been authorized to provide for educator preparation.

11.04(3)(b) Programs placed on conditional approval or probation will receive identified areas for improvement that must be fully met through additional reviews and site visits prior to reconsideration by the State Board of Education.

11.04(3)(c) Programs placed on conditional approval may continue to enroll candidates but programs receiving probationary status are not able to enroll new candidates until such time that their status moves to conditional or approved.

11.04(3)(d) Programs placed on probationary status have no more than a year to address areas for improvement and either receive full or conditional approval.

11.04(3)(d)(i) If programs on probation cannot improve their approval status within the identified timeline, they will be terminated.

12.00 Reserved

Commented [KT10]: Formerly "Alternative Teacher Programs" (which have been incorporated into 11.00 through 11.04). Reserving 12.00 to allow for 13.00 thru 16.00 rulesets to remain as they are presently.

13.00 Individualized Alternative Principal Programs and Alternative Principal Programs

The following will serve as standards for the initial and continuing approval of individualized alternative principal programs and alternative principal programs.

13.01 In designing an individualized alternative principal program, the school district, charter school or nonpublic school shall, at a minimum, submit to the State Board:

13.01(1) documentation of the coursework, practicum and other educational requirements identified by the school district, charter school or nonpublic school that will comprise the individualized alternative principal program plan and that will be completed while the applicant is employed under the principal authorization; and

13.01(2) a letter from the district, charter school or nonpublic school stating its intention to employ the applicant as a principal or assistant principal upon issuance of the principal authorization;

13.01(3) At a minimum, an individualized alternative principal program must ensure that:

13.01(3)(a) the applicant will attain the information, experience, training and skills comparable to those possessed by a person who qualifies for an initial principal license as provided in section 22-60.5-301(1)(a), C.R.S.;

13.01(3)(b) upon completion, the candidate will be able to provide documented evidence of having met or surpassed the Principal Quality Standards cited in section 6.00 of these rules;

13.01(3)(c) the candidate will receive coaching and mentoring from one or more licensed principals and administrators, as well as continuing performance-based assessment of the candidate's skills development;

13.01(3)(d) except that, if the candidate participates in a nonpublic school's individualized alternative principal program approved by the State Board of Education, the candidate must receive coaching and mentoring from one or more principals and administrators who have three or more years of experience in a nonpublic school;

13.01(3)(e) the candidate demonstrates professional competencies using the assessment of quality standard measures in subject matter areas as specified by rule of the State Board pursuant to section 22-60.5-303, C.R.S.; and

13.01(3)(f) the candidate receives information and training on special education laws and regulations, as outlined in section 22-60.5-111(14)(c)(IV), C.R.S.

13.02 A school district or districts, BOCES, accepted institution of higher education, nonprofit organization, charter school, the institute, nonpublic school or any combination thereof may apply to the State Board for approval as a designated agency of alternative principal programs under section 22-60.5-305.5, C.R.S.

13.02(1) In designing an alternative principal program, the designated agency must, at a minimum, demonstrate that:

13.02(1)(a) the applicant will attain the information, experience, training and skills comparable to those possessed by a person who qualifies for an initial principal license as provided in section 22-60.5-301(1)(a), C.R.S.;

13.02(1)(b) the program content meets or exceeds the Principal Quality Standards cited in section 6.00 of these rules;

13.02(1)(c) training of alternative principals will include a minimum of 225 clock-hours of planned instruction, and activities must include, but not be limited to, principal preparation courses that meet the Principal Quality Standards and English Language Learner Quality Standards.

13.02(1)(d) the candidate will receive coaching and mentoring from one or more licensed principals and administrators, as well as continuing performance-based assessment of the candidate's skills development;

13.02(1)(e) the candidate will be required to demonstrate professional competencies using the assessment of quality standard measures in subject matter areas as specified by rule of the State Board pursuant to section 22-60.5-303, C.R.S.;

13.02(1)(f) the candidate will receive information and training on special education laws and regulations, as outlined in section 22-60.5-111(14)(c)(IV), C.R.S.; and

13.02(1)(g) the alternative principal program will be designed to be completed in three years or less.

13.02(1)(g)(i) School districts may only employ a person under a principal authorization for three years, after which time, the person must obtain an initial or professional license in order to continue working as a principal.

13.02(2) Proposals submitted by entities for authorization as designated agencies of alternative principal programs must include, but not be limited to:

13.02(2)(a) demonstrated evidence of a need for the proposed program;

13.02(2)(b) evidence of the establishment of an advisory council by the designated agency;

13.02(2)(c) a listing of the advisory council's duties, which must include but need not be limited to: providing the designated agency with information regarding the organization, management and operation of the approved alternative principal program;

13.02(2)(d) criteria for the selection of mentor principals which must include but need not be limited to: evidence of exemplary school leadership; the ability to model and counsel the alternative principal; relevant coursework; and a valid license and endorsement as a professional principal.

13.03 When a new designated agency is approved to offer a new alternative principal program, the department may review the new program no sooner than twelve months but not more than twenty-four months after the new program is initially approved. The designated agency that operates an alternative principal program will be reauthorized not more than once every five years.

14.00 Colorado Teacher of the Year Program

14.01 Administration

14.01(1) The Colorado Teacher of the Year is selected in accordance with the National Teacher of the Year selection criteria as articulated by the Council of Chief State School Officers.

14.01(2) The Department may reward the educator with gifts, services and opportunities that may include:

14.01(2)(a) a sabbatical from teaching responsibilities that includes moneys awarded to the recipient's employer for the purpose of hiring a substitute teacher during the award recipient's sabbatical;

14.01(2)(b) a cash gift;

14.01(2)(c) travel and lodging expenses;

14.01(2)(d) a computer;

14.01(2)(e) supplies and equipment for the award recipient's classroom or school; and

14.01(2)(f) the opportunity to receive additional training or education.

14.01(3) During tenure as Colorado Teacher of the Year, the award recipient may participate in activities such as:

14.01(3)(a) attending local, regional and national events related to the award recipient's designation as Colorado Teacher of the Year;

14.01(3)(b) promoting the teaching profession;

14.01(3)(c) teaching best practices to other teachers;

14.01(3)(d) teaching temporarily in other public schools or school districts;

14.01(3)(e) mentoring students in teacher preparation programs and supporting newer teachers in Colorado;

14.01(3)(f) collaborating with institutions of higher education in scholarly research and teaching; and

14.01(3)(g) participating in special projects relating to education that are important to the award recipient.

15.00 Inactive Status of Licenses

15.01 Holders of professional licenses may choose to place their licenses in inactive status by notifying the Department, via an online application, of their intent to place a professional license on inactive status.

15.02 While on inactive status, the expiration date of a professional license is suspended and the individual is deemed as not holding the credential.

15.03 A person may return a professional license to active status at any time upon application.

15.03(a) Upon application to return to active status, the Department must reissue the professional license with a new expiration date reflecting the period remaining on the professional license as of the date the license-holder placed the license in inactive status.

15.03(b) The Department may, upon request of a license-holder, and with evidence of the license-holder's active military service, reissue the license with a new expiration date reflecting the amount of time which remained on the license prior to the license-holder's active military service, plus the amount of time during which the license-holder served in active military service.

15.04 Renewal of licenses previously inactive:

15.04(a) Any person who placed a license on inactive status may, but is not required, to complete professional development activities which meet the requirements of section 7.02 of these rules. Such activities completed while on inactive status must apply to renewal of the person's professional license after the person returns to active status.

15.04(b) At the time of renewal, the license-holder must provide to the Department evidence of completion of the professional development activities which meet the requirements for license renewal as provided in section 7.02 of these rules and which were completed within the seven years preceding the date on which the professional license will expire after its return to active status.

16.00 Waivers

16.01 A written request for a waiver must be received by the State Board of Education at least 120 days prior to proposed implementation. The State Board is authorized to waive any requirement regarding alternative teacher programs or approved induction programs. Waiver applications must include:

16.01(1) the specific portion of these rules to be waived;

16.01(2) the rationale for the request;

16.01(3) detailed information on the innovative programs or plans to be instituted;

16.01(4) financial impact of the proposed waiver, if applicable;

16.01(5) reasons why these innovative programs or plans cannot be implemented under the applicable rule; and

16.01(6) a detailed plan for the evaluation of the innovative programs or plans to show their effectiveness in improving the quality of the affected educators.

Editor's Notes

History

Rules 2260.5-R-1.00, 15.00, 15.05 emer. rules eff. 08/14/2008.
Rules 2260.5-R-1.00, 15.00, 15.05 eff. 10/31/2008.
Rules 2260.5-R-1.16, 4.04 eff. 10/30/2009.
Rules 2260.5-R-1.00-2.04, 3.01, 3.03, 3.12, 4.03, 4.12, 4.17, 7.02, 13.00, 18.00-19.00 eff. 07/30/2010.
Rules 2260.5-R-1.19, 4.11, 4.14(11)(d-e) emer. rules eff. 09/16/2010.
Rules 2260.5-R-1.17, 4.11, 6.13, 10.05 eff. 12/31/2010.
Rules 2260.5-R-1.20, 8.22-8.23 eff. 01/31/2011.
Rules 2260.5-R-1.21, 4.16, 15.00-15.00(5) eff. 09/30/2012.
Rules 2260.5-R-2.01, 2.03, 3.01, 3.03, 3.05-3.07, 3.12, 4.02-4.04, 4.11, 4.13, 4.17, 8.02, 8.04, 8.14, 12.02, 15.03, 18.00, 23.01 eff. 01/30/2013.
Rules 2260.5-R-1.23, 3.01(2)(e)(ii)(3), 3.06(1), 3.12(3)(b)(i), 4.13(3), 4.13(5), 4.17 eff. 05/15/2014.
Rule 2260.5-R-8.20 eff. 07/30/2014.
Rule 2260.5-R-4.18 eff. 08/14/2014.
Entire rule eff. 03/30/2016.
Rules 2260.5-R-1.24, 2.01(26), 3.02(1), 3.05-3.07, 4.02(1), 4.09, 4.12-4.14, 4.17, 4.18, 7.02(1), 8.14, 9.01, 9.05-9.07, 10.02, 10.04-10.06, 11.09, 12.00, 12.02, 13.00, 13.01, 15.00, 15.01 eff. 06/14/2017.
Rules 2260.5-R-1.25, 2.01, 12.02(1), 13.00, 15.00, 18.00, 18.01 eff. 01/30/2018.
Entire rule eff. 08/14/2018.
Entire rule eff. 05/30/2019.
Entire rule eff. 07/30/2020.
Entire rule eff. 04/30/2021.
Entire rule eff. 12/30/2021.
Entire rule eff. 11/30/2022
Entire rule eff. TBD upon approval

Annotations

Introductory paragraph of Rule 2260.5-R-23.00 (adopted 11/10/2005) was not extended by House Bill 07-1167 and therefore expired 05/15/2007.
Rules 2260.5-R-3.03(2)(a), 3.06(1)(a), 3.06(1)(c), 3.07(1)(d), 4.13(4)(c), 4.17(7), 15.00(2)(d), 15.00(2)(j) (adopted 12/14/2006) were not extended by Senate Bill 08-075 and therefore expired 05/15/2008.
Rules 2260.5-R-3.07(1), 4.17(1), 4.17(2), 4.17(3) were repealed by Senate Bill 08-075, eff. 05/15/2008.
Rules 4.11(6)-4.11(6)(d) (adopted 08/08/2012) were not extended by Senate Bill 13-079 and therefore expired 05/15/2013.
Rule 4.04 (adopted 12/05/2012) was not extended by Senate Bill 15-100 and therefore expired 05/15/2015.

DEPARTMENT OF EDUCATION

Colorado State Board of Education

COLORADO EDUCATOR LICENSING ACT OF 1991

1 CCR 301-37

[Editor's Notes follow the text of the rules at the end of this CCR Document.]

1.00 Statement of Basis and Purpose

The statutory basis for these rules is found in section 22-60.5-101, et seq, C.R.S., the Colorado Educator Licensing Act of 1991, and section 22-2-109(1), C.R.S., State board of education – additional duties. These rules establish the standards and criteria for the issuance of licenses and authorizations to teachers, special services providers, principals, and administrators. The Act calls for the State Board of Education to adopt rules for a three-tiered system of licensure for education personnel which includes an initial license for entry-level educators, a professional license for experienced educators, and a voluntary master certificate for outstanding educators. Section 22-60.5-106, C.R.S. requires the State Board to establish appropriate license endorsement areas and their eligibility criteria. Those endorsements and criteria are set forth in 1 CCR 301-101. These rules also provide for the issuance of special authorizations to educators as necessary to meet the needs of Colorado schools and students. Standards and processes for the approval of educator preparation programs through institutions of higher education and other designated agencies are provided. Criteria for the renewal of licenses and authorizations, which provide for significant involvement of practicing educators, are established. Standards for endorsement in subject areas or other areas of educational specialization are prescribed.

These rules provide a process for the recognition of educator preparation programs in other states to facilitate the movement of educators among states. The rules establish the requirements for induction programs to assist new educators through support, supervision, ongoing professional development and evaluation.

The rules establish the standards and processes by which licenses may be denied, suspended, annulled or revoked for conviction of certain criminal offenses, unethical behavior, professional incompetence, and other reasons enumerated by statute. Other miscellaneous provisions are included to meet the requirements of the Act.

2.00 General Licensing Regulations

The Colorado Department of Education has the sole authority to issue educator licenses and authorizations. Pursuant to sections 22-63-201 and 22-32-126, C.R.S., a Colorado license or authorization is required for employment as a teacher, special services provider, or principal in a Colorado school or school district. All licenses and authorizations must be endorsed to indicate the grade levels/developmental levels and specialization area(s) which are appropriate to the applicant's preparation, training, and experience.

2.01 Definitions

2.01(1) Accepted institution of higher education: An institution of higher education that offers at least the standard bachelor's degree and is recognized by one of the following regional associations: Western Association of Schools and Colleges; Northwest Commission on Colleges and Universities; Higher

Learning Commission; New England Commission of Higher Education; Southern Association of Colleges and Schools; or Middle States Commission on Higher Education.

2.01(2) Administrator: Any person who may or may not be licensed, but who administers, directs or supervises an education instructional or education-related program, or a portion thereof, in any school or school district, or nonpublic school in the state and who is not the chief executive officer or an assistant chief executive officer of such school.

2.01(3) Alternative principal: Any person employed as the chief executive officer or an assistant chief executive officer of any school in the state to administer, direct or supervise the education instruction program in such school or nonpublic school under a principal authorization and is actively participating in an alternative principal program or an individualized alternative principal program.

2.01(4) Alternative principal program: a program of study provided by a designated agency, as described in section 22-60.5-305.5(6), C.R.S., for principal preparation designed to provide the information, experience, and training to enable participants to develop the skills and obtain experience and training comparable to that possessed by a person who qualifies for an initial principal license.

2.01(5) Alternative teacher contract: A one- or two-year contract, as described in section 22-60.5-207 C.R.S., entered into by a holder of an alternative teacher license pursuant to section 22-60.5-201(1)(a), C.R.S., or an interim authorization pursuant to 22-60.5-111(7), C.R.S., and a school district, board of cooperative services, nonpublic school, or charter school that provides or participates in, a one-year or two-year alternative teacher program.

2.01(6) Alternative teacher program: A one-year or two-year program of study and training for teacher preparation for a person of demonstrated knowledge and ability who holds an alternative teacher license or an interim authorization. An alternative teacher program must meet the standards of and obtain the approval of the state board of education and, upon completion, lead to a recommendation for licensure by the designated agency providing the alternative teacher program.

2.01(7) Alternative teacher support team: A team established by the designated agency for each holder of an alternative teacher license or an interim authorization pursuant to 22-60.5-111(7), C.R.S., employed as an alternative teacher. At a minimum, each alternative teacher support team must be composed of the alternative teacher's mentor, the building principal and a representative of the approved designated agency.

2.01(8) Alternative teacher: Any person employed to instruct students in any public or nonpublic school in the state under an alternative teacher license or interim authorization pursuant to 22-60.5-111(7) and actively participating in an alternative teacher program.

2.01(9) Approved content tests: assessments approved by the State Board of Education for the purpose of evaluating the required subject matter knowledge and skills for a license, authorization, and/or endorsement.

2.01(10) Approved induction program: A program of continuing professional development for initial license-holders that meets the requirements of and is approved by the State Board of Education, and that upon completion leads to a recommendation for a professional license by the school district or districts, charter school, nonpublic school, or the institute providing such induction program.

2.01(11) Approved program of educator preparation: A program of study for the preparation of educators, approved by the State Board of Education, that prepares educator candidates to meet the quality standards established pursuant to section 22-9-105.5 (10), C.R.S. and the requirements for licensure endorsement(s) adopted by state board rule pursuant to section 22-60.5-106, C.R.S. and which, upon completion, leads to a recommendation for licensure.

2.01(12) Board of Cooperative Services (BOCES): A regional educational service unit designed to provide supporting, instructional, administrative, facility, community or any other services contracted by participating members.

2.01(13) Board of education: The governing body authorized by law to administer the affairs of any school district in the state except junior and community college districts. "Board of education" also includes a BOCES organized pursuant to section 22-5-101, C.R.S. 2.01(14) Charter school: A school authorized by a school district pursuant to Part 1 of Article 30.5 of Title 22 or a school authorized by the state charter school institute pursuant to Part 5 of Article 30.5 of Title 22.

2.01(14) Colorado Academic Standards: The state academic standards that identify the knowledge and skills that a student should acquire as the student progresses from preschool through elementary and secondary education, as adopted by the State Board of Education pursuant to section 22-7-1005, C.R.S. The Colorado Academic Standards are available at www.cde.state.co.us.

2.01(15) Colorado Teacher of the Year: The Colorado teacher selected as Teacher of the Year in the state program administered by the Department and coordinated through the national teacher of the year program.

2.01(16) Critical teacher shortage: A grade level or content area in which a local education provider (LEP) determines there is a severe need and impact on students and in which an LEP has been unable to place an appropriately licensed teacher in the vacant position(s) despite reasonable attempts to fill the position.

2.01(17) Department of Education or Department: The Colorado State Department of Education (CDE) as defined in section 24-1-115, C.R.S.

2.01(18) Designated agency: A school district or districts, a BOCES, an accepted institution of higher education, a nonprofit organization, a charter school, nonpublic school, the institute, or any combination thereof, that is responsible for the organization, management and operation of an alternative teacher program or an alternative principal program.

2.01(19) Diversity: The backgrounds of all students and school personnel.

2.01(20) Endorsement: The designation on a license or an authorization of grade level(s) or developmental level(s), subject matter, or service specialization in accordance with the preparation, training and experience of the holder of such license or authorization. Endorsements typically reflect major areas of specialization.

2.01(21) Field-based experiences: Experiences conducted at a school site, school administration center, school clinic, or community agency. These experiences may include classroom observations; tutoring; assisting school principals, administrators, teachers or special services providers; participation in school- and community-wide activities; student teaching or internships.

2.01(22) Individualized alternative principal program: Created in collaboration between a school district, charter school, the institute, or nonpublic school and an individual identified as requiring principal preparation, it is a plan of preparation that aligns to the Principal Quality Standards in section 6.00 of these rules and comprises coursework, practicums, and other educational requirements the individual will complete while serving as a principal or assistant principal under a principal authorization in the collaborating school district, charter school, the institute or nonpublic school.

2.01(23) Institute: The state charter school institute created pursuant to section 22-30.5-503, C.R.S.

2.01(24) Licensure: The official recognition by a state governmental agency that an individual has met state-mandated minimum requirements and is approved to practice as a duly certified/licensed educator in the state.

2.01(25) Local education provider (LEP): A school district, a charter school authorized by a school district pursuant to Part 1 of Article 30.5 of Title 22, C.R.S., a charter school authorized by the State Charter School Institute pursuant to Part 5 of Article 30.5 of Title 22, C.R.S., or a BOCES created and operating pursuant to Article 5 of Title 22, C.R.S. that operates a public school.

2.01(26) Mentor administrator: Any administrator who is designated by a school district or districts, charter school, nonpublic school, or the institute providing an approved induction program for initial administrator license-holders, who has demonstrated outstanding administrative skills and school leadership and who can provide exemplary modeling and counseling to initial administrator license-holders participating in an approved induction program.

2.01(27) Mentor principal: Any principal who is designated by a school district or districts, charter school, nonpublic school, or the institute providing an approved induction program for initial principal license-holders, who has demonstrated outstanding principal skills and school leadership and who can provide exemplary modeling and counseling to initial principal license-holders participating in an approved induction program.

2.01(28) Mentor special services provider: Any special services provider who is designated by a school district or districts, charter school, nonpublic school, or the institute providing an approved induction program for initial special services license-holders, who has demonstrated outstanding special services provider skills and school leadership and who can provide exemplary modeling and counseling to initial special services license-holders participating in an approved induction program.

2.01(29) Mentor Teacher:

2.01(29)(a) A teacher who holds a professional license designated by a school district, charter school, or nonpublic school employing an alternative teacher, who has demonstrated outstanding teaching and school leadership and who can provide exemplary modeling and counseling to alternative teachers participating in an alternative teacher program; or

2.01(29)(b) Any teacher who is designated by a school district or districts, charter school, nonpublic school, or the institute providing an approved induction program for initial teacher license-holders, who has demonstrated outstanding teaching and school leadership and who can provide exemplary modeling and counseling to initial teacher license-holders participating in an approved induction program.

2.01(30) Nonpublic School: Any independent or parochial school that provides a basic academic education. Neither the State Board of Education nor any local school board has jurisdiction over the internal affairs of any independent or parochial school in Colorado.

2.01(31) Practicum: An intensive experience in which candidates practice and demonstrate professional skills and knowledge. Student teaching and internships are examples of a practicum.

2.01(32) Principal: Any person who is employed as the chief executive officer or an assistant chief executive officer of any school in the state and who administers, directs or supervises the education instruction program in such school or nonpublic school.

2.01(33) Qualified, licensed teacher: An individual who holds a valid Colorado teaching license in the grade level and subject endorsement area(s) in which that individual teaches or will teach.

2.01(34) Rural school district: A school district in Colorado that the Department determines is rural, based on the district's geographic size and its distance from the nearest large, urbanized area, with a total student enrollment of 6,500 students or fewer students.

2.01(35) School: Any of the public schools of the state.

2.01(36) School district: Any school district organized and existing pursuant to law, but not including junior or community college districts. "School district" includes a BOCES organized pursuant to 22-5-101, C.R.S.

2.01(37) Special services provider: Any person other than a teacher, principal or administrator who is employed by any school district, charter school, nonpublic school or the institute to provide professional services to students in direct support of the education instructional program.

2.01(38) Specialization area: The sequence of courses and experiences in the academic or professional area that the candidate plans to teach, for the grade level(s) or developmental level(s) at which the candidate plans to teach, and/or for the services that the candidate plans to provide. Examples of specialty areas include science (grades 7-12), elementary education (grades K-6), early childhood education (ages birth-8), reading specialist (grades K-12) and physical education (grades K-12).

2.01(39) State Board of Education: The Colorado State Board of Education established by section 1 of Article IX of the Constitution of the State of Colorado.

2.01(40) Student teaching: Part of the field or clinical experience required in a teacher preparation program as identified in section 23-1-121(2)(d), C.R.S., that is an in-depth, direct teaching experience conducted in a school and classroom setting. It is considered a culminating field-based experience for the basic teacher preparation program where candidates practice and demonstrate professional skills and knowledge.

2.01(41) Teacher: Any person employed to instruct students in any public or nonpublic school in the state.

2.01(42) Teacher apprentice: a person who is registered and enrolled in a state-approved teacher degree apprenticeship program (pursuant to section 22-60.5-111.5, C.R.S.), is enrolled in an affiliated bachelor's degree program from an accredited institution, and holds a teacher apprenticeship authorization pursuant to section 22-60.5-111(16), C.R.S.

2.01 (43) Teacher of record: A person licensed pursuant to section 22-60.5-201(1)(a.5), C.R.S.

2.02 Validity of certificates/license.

2.02(1) Certificates and letters of authorization issued by the Department prior to July 1, 1994, must remain valid for the period for which they were issued.

2.02(2) Endorsements placed on teacher or special services certificates prior to July 1, 1994, which were based on major areas of specialization or experience and academic credit, may be issued on subsequent teacher or special services license renewals provided all renewal requirements specified in section 7.00 of these rules have been met.

2.02(3) Certificates, licenses and authorizations which have expired are not valid unless the applicant has a complete and active application on file with the Department before the expiration date identified on the applicant's current and active educator license, certificate or authorization.

2.03 General Requirements for Colorado Licenses

2.03(1) Degree. Each applicant for a Colorado license must hold the appropriate academic degree for the license and/or endorsement sought from an accepted institution of higher education.

2.03(1)(a) It will be determined that an applicant "holds" or "has been awarded" the bachelor's or higher degree when the registrar of the accepted institution of higher education certifies that the applicant

has met all institutional requirements for graduation with the degree, whether or not the degree has been conferred upon the applicant in formal ceremonies or otherwise conveyed to the individual.

2.03(1)(b) The Department and accepted institutions of higher education may recognize credits and degrees earned in foreign institutions of higher education if, after appropriate evaluation by an established credentials evaluation service as selected by the Department, there is evidence that such credits and degrees are the equivalent of those approved as fulfilling the specific license requirements.

2.03(2) Approved program of preparation. An initial license may be issued upon satisfactory completion of an approved program of preparation, an alternative teacher program, an alternative principal program, an individualized alternative principal program or an out-of-state educator preparation program approved or authorized by a state other than Colorado as defined in section 2.03(3)(b) of these rules, and upon demonstration of required competencies as specified in these rules and in 1 CCR 301-101 Rules for the Administration of Educator License Endorsements. Applicants who completed an approved program in a state other than Colorado must meet the requirements in section 2.03(3) of these rules.

2.03(3) Out-of-state applicants. An initial license may be issued to an applicant from another state or country whose qualifications meet or exceed the requirements of the State Board of Education and who has met the following requirements:

2.03(3)(a) has completed the appropriate degree, experiences and educational level for the license and endorsement(s) requested as specified in these rules;

2.03(3)(b) has successfully completed an educator preparation program approved or authorized by a state other than Colorado, including a program at an accepted institution of higher education in the endorsement area sought or another educator preparation program, including an alternative teacher preparation program;

2.03(3)(c) has successfully completed field-based experience that meets or exceeds Colorado's field-based experience requirement as provided by section 23-1-121(2)(d), C.R.S.;

2.03(3)(d) holds a standard license issued by the state education agency of another state or country, is eligible to hold a standard license issued by the state education agency of the preparing state, or meets the official requirements of the legally designated licensing agency of the preparing state; and

2.03(3)(e) has demonstrated professional competencies and depth of content knowledge appropriate to the license and endorsement requested.

2.03(4) An out-of-state applicant must meet the subject matter knowledge requirements for every endorsement sought by demonstrating professional competencies and depth of content knowledge for each endorsement or by providing evidence of completion of three or more years of successful full-time, fully licensed, evaluated, post-preparation experience in the endorsement area(s) sought within the previous seven years as a teacher, special services provider, principal or administrator in an established elementary or secondary school in another state or country.

2.03(4)(a) Applicants who satisfy the requirements of sections 2.03(3)(a)-(d) but not 2.03(3)(e) may be eligible for an interim authorization as provided in section 4.09 of these rules.

2.03(4)(b) Applicants who satisfy the requirements in sections 2.03(3)(a)-(d) but not 2.03(3)(e) and who provide evidence of completion of three or more years of successful full-time, fully licensed, evaluated post-preparation experience within the previous seven years as a teacher, special services provider, principal, or administrator in an established elementary or secondary school in another state or country, may be eligible for a Colorado professional license.

2.03(5) The State Board of Education may enter into interstate reciprocal agreements whereby the Department agrees to issue initial licenses to persons licensed in other states and such states agree to issue licenses to Colorado license-holders. Such agreements must not be inconsistent with section 2.03(3) of these rules.

2.03(6) Pursuant to section 22-60.5-201(3)(c), C.R.S., the state board may annually designate teacher shortage areas and modify the requirements in sections 4.00 and 5.00 of 1 CCR 301-101 for licensure and endorsement in such shortage areas for the purpose of issuing initial teacher licenses or interim authorizations as outlined in these rules to applicants.

2.03(7) Pursuant to section 22-60.5-201(3.5), C.R.S., the Department may issue professional teacher licenses to applicants who have earned and present certificates issued by the National Board for Professional Teaching Standards.

2.04 Application Procedures

2.04(1) Prior to submitting to the Department an application for a license, authorization, or endorsement, or for the renewal of a license or authorization, the applicant must submit to the Colorado Bureau of Investigation (CBI) a complete set of his or her fingerprints taken by a qualified law enforcement agency, an authorized employee of a school district or BOCES using fingerprinting equipment that meets the Federal Bureau of Investigation image quality standards, or any third party approved by the CBI for the purpose of obtaining a criminal history record check, and any fingerprint processing fee(s).

2.04(1)(a) The applicant must give his or her social security number, if any, to the CBI and must indicate to the CBI that the criminal history is to be forwarded to the Department.

2.04(1)(a)(i) If an individual submits an application or renewal application after the expiration of a credential, the individual must submit a new, complete set of fingerprints to the CBI.

2.04(1)(a)(ii) If an applicant previously submitted a complete set of fingerprints to the CBI pursuant to section 22-2-119.3, C.R.S., the individual need not submit a new set of fingerprints unless: (1) he or she has not continuously resided in Colorado for more than one full year; (2) he or she submits an application or renewal application after the expiration of a credential from the Department; or (3) the individual has been convicted of a felony or misdemeanor, other than a misdemeanor traffic offense or traffic infraction, subsequent to the educator's licensure or authorization.

2.04(2) An applicant must submit a complete application to the Department via its online system, which includes all required information and documentation as set forth in these rules, the application form, and any other application instructions published by the Department on its website. Required information and documentation includes that which the applicant is responsible for submitting and any other information and documentation that may be required from other sources to support the application, including but not limited to the following:

2.04(2)(a) The applicant must provide official transcripts showing conferral of the degree required for the license and endorsement sought:

2.04(2)(a)(i) Each transcript must be authentic, original or photocopy, bearing the printed or embossed seal of the institution and the signature of the registrar, and include descriptive titles, course numbers, credits and grades for each course listed and degrees conferred, if any. For the purpose of these rules, credits must be in semester hours. Quarter, trimester, unit or term credits will be converted to semester hours at the time of evaluation. Submission of an incomplete, unofficial or illegible transcript will render an application incomplete.

2.04(2)(a)(ii) Transcripts from institutions of higher education outside the United States must be evaluated by an established credential evaluation service, selected by the Department, for course equivalence.

2.04(2)(a)(iii) Copies of official transcripts submitted with an application become part of the applicant's record with the Department and are not returnable.

2.04(2)(b) The applicant must provide an institutional recommendation from the educator preparation program, appropriate to the license sought and on the Department's program verification form, which at a minimum confirms: the date of completion of an educator preparation program; endorsement area(s) and grade level(s); completion of student teaching, clinical experience or practicum; that the applicant holds or is eligible to hold a license in the preparing state or territory; and any additional information requested on the Department form.

2.04(2)(b)(i) The recommendation must certify that the applicant completed the educator preparation program in a satisfactory manner and is in good standing; and

2.04(2)(b)(ii) The recommendation must indicate the subject and level or grades of student teaching, the number of hours of field-based experience performed, and the area of recommended endorsement as defined in 1 CCR 301-101 Rules for the Administration of Educator License Endorsements.

2.04(2)(b)(iii) An individual applying for an initial license or professional license for the first time who holds a valid license or certificate in another state and demonstrates three or more years of successful full-time, evaluated, fully licensed teaching experience (post completion of an educator preparation program) within the previous seven years may be exempt from the institutional recommendation requirement.

2.04(2)(c) When demonstrating professional competencies and depth of content knowledge by approved content test(s), the applicant must provide a copy of the official test score report(s). Submission of a score report for a test not approved by the state board at the time of application will render the application incomplete. When demonstrating professional competencies and depth of content knowledge by portfolio submission, achievement of sufficiently high education course work grades, or a combination of methods, failure to submit the documentation or other evidence required by state board rule for the license sought will render the application incomplete.

2.04(2)(d) Out-of-state applicants must include a copy of any and all educator credentials held (valid or expired) in other states or territories.

2.04(2)(e) The applicant must submit the following to verify their identity:

2.04(2)(e)(i) the applicant's name and mailing address; and

2.04(2)(e)(ii) applicant's social security number, or if unavailable, the individual taxpayer identification number, or one of the following documents verifying the applicant's identity: a clear copy of one of the following forms of government-issued photo identification: a valid passport or passport card; a valid driver's license from any state; an identification card or document from any state; a United States military card or a military dependent identification card; a United States Coast Guard Merchant Mariner card; or a Native American tribal document.

2.04(2)(f) The applicant must submit a complete and accurate response, including but not limited to every required disclosure, form and supporting document, to every applicable section of the online application and attest that all information submitted is true and complete to the best of the applicant's knowledge.

2.04(3) The fee for the evaluation and review of an application is established by the State Board of Education and shall be nonrefundable.

2.04(4) In any application for licensure, the applicant must indicate all endorsements sought and pay the established fees for the requested endorsement(s) at the time of submission of the application. If an applicant fails to indicate an endorsement(s) sought in a license application and subsequently seeks an endorsement, the Department will not consider the endorsement request until the applicant submits a complete added endorsement application and all required fees.

2.04(5) An application is deemed complete when all required information, documentation and fees are received by the Department. An application that fails to include required information, documentation or fees will be deemed incomplete. Within 45 days of submission of an application, applicants will be notified if their application is incomplete. An applicant whose application is deemed incomplete may cure the deficiency or submit to the Department a written request for reconsideration which states the basis for reconsideration. An applicant who fails to cure the deficiency or request reconsideration within 60 days of notification will be deemed to have withdrawn the application and such withdrawal shall not be subject to appeal or review. The Department will issue a written determination to an applicant in response to any request for reconsideration within 30 days of its receipt of the request.

2.04(6) Applications that are initiated in the Department's online system but not submitted will be closed and deemed withdrawn 14 days after initiation. Such closed and withdrawn applications shall not be subject to appeal or review.

2.04(7) The Department will promptly act upon complete applications. The Department may require additional information and documentation from an applicant to determine compliance with applicable laws and rules or to verify any information and documentation submitted.

3.00 Types of Licenses

3.01 Initial Teacher License

An initial teacher license is valid for three years from the date of issuance and may be renewed as provided in section 7.01 of these rules.

3.01(1) An initial teacher license may be issued to an applicant who:

3.01(1)(a) holds an earned bachelor's or higher degree from an accepted institution of higher education;

3.01(1)(b) has completed an approved program of preparation at an accepted institution of higher education, including the field-based experience required by section 23-1-121(2)(d), C.R.S.;

3.01(1)(c) has provided an institutional recommendation which meets the requirements outlined in 2.04(2)(b) and:

3.01(1)(c)(i) verifies satisfactory completion of the approved program;

3.01(1)(c)(ii) specifies the grade/developmental level(s) and endorsement area(s) or specialization(s) completed by the applicant;

3.01(1)(c)(iii) verifies successful completion of student teaching, internship or practicum as specified in 2.01(41) of these rules; the grade/developmental level(s) and endorsement/specialization areas of the experience; and

3.01(1)(c)(iv) certifies that the applicant has demonstrated thorough knowledge of the subject matter to be taught and has the competencies essential for educational service.

3.01(1)(d) has submitted a complete application for a license as defined in section 2.04 of these rules; and

3.01(1)(e) has demonstrated professional competencies and depth of content knowledge necessary for teaching in the endorsement area by:

3.01(1)(e)(i) passage of the approved content test(s);

3.01(1)(e)(ii) approval of a portfolio of coursework reviewed by the Department or its designee. This option is available for up to 1,000 applicants per fiscal year on a first-come, first-served basis, and CDE will publicly post on its website when the 1,000-applicant limit has been reached;

3.01(1)(e)(ii)(A) A portfolio of coursework will consist of coursework and teaching-based artifacts and evidence that demonstrate professional competencies and depth of content knowledge, including, but not limited to, live teaching videos, copies of lessons delivered by the applicant, syllabi and other curricular materials developed or used by the applicant, papers written by the applicant, demonstrated classroom experience in which a rubric review was utilized, and/or professional development assessment of content knowledge, etc.

3.01(1)(e)(ii)(B) Portfolio artifacts and evidence must be submitted with a content matter worksheet(s) for the endorsement sought and demonstrate competency in the endorsement area as defined by the endorsement area standards in 1 CCR 301-101.

3.01(1)(e)(ii)(C) Portfolio coursework artifacts and evidence of depth of content knowledge will be evaluated based on the degree to which they demonstrate competency in the endorsement area sought, as outlined below, and applicants will receive ratings of “met” or “not met” based on the alignment of the artifacts and evidence to the endorsement area standards in 1 CCR 301-101. Each applicable endorsement standard will be evaluated as follows:

3.01(1)(e)(ii)(C)(I) score 0 = No evidence provided or provided evidence does not align to the endorsement standard;

3.01(1)(e)(ii)(C)(II) score 1 = Evidence provided does not fully demonstrate attainment of the standard; and

3.01(1)(e)(ii)(C)(III) score 2 = Adequate evidence demonstrates attainment of the standard;

3.01(1)(e)(iii) submitting evidence of achieving coursework in the endorsement area sought, as defined by the department, with a minimum average grade of B-; or

3.01(1)(e)(iv) a combination of the measures outlined in 3.01(1)(e).

3.01(1)(e)(v) In addition to the options for demonstrating professional competencies and depth of content knowledge for initial teacher licensure outlined in rule 3.01(1)(e), secondary teachers may also demonstrate subject matter knowledge by:

3.01(1)(e)(v)(A) an earned bachelor's or higher degree from an accepted institution of higher education in the endorsement area; or

3.01(1)(e)(v)(B) 24 semester hours of qualifying coursework in the endorsement area sought, as defined by the department, with a minimum average grade of B- as demonstrated through transcript evaluation.

3.01(2) An initial teacher license may be issued to an applicant who has completed an alternative teacher program and who:

3.01(2)(a) holds an alternative teacher license as prescribed in section 3.12 of these rules or an interim authorization as prescribed in section 4.09 of these rules;

3.01(2)(b) has completed an alternative teacher program as defined in section 2.01(6) of these rules;

3.01(2)(c) has submitted a complete application for an initial license as defined in section 2.04 of these rules;

3.01(2)(d) has provided an institutional recommendation from the approved designated agency and which meets the requirements outlined in 2.04(2)(b), and:

3.01(2)(d)(i) verifies satisfactory completion of the alternative teacher program;

3.01(2)(d)(ii) verifies employment as an alternative teacher as provided in sections 22-60.5-201 and 22-60.5-205, C.R.S., in the endorsement area sought; and

3.01(2)(d)(iii) certifies that the applicant has demonstrated thorough knowledge of the subject matter to be taught and has demonstrated the competencies essential for educational service.

3.01(2)(e) has demonstrated subject matter knowledge necessary for teaching in the endorsement area as specified in 3.01(1)(e) of these rules.

3.02 Initial Special Services License

An initial special services license is valid for three years from the date of issuance and may be renewed as provided in section 7.01 of these rules. The standards and competencies for each special services endorsement are set forth in state board of education rule, 1 CCR 301-101.

3.02(1) An initial special services license may be issued to an applicant who:

3.02(1)(a) holds an earned bachelor's or higher degree from an accepted institution of higher education;

3.02(1)(b) has completed an approved special services preparation program at an accepted institution of higher education, or has alternatively met the requirements for preparation as identified by State Board of Education Rule;

3.02(1)(c) has supplied an institutional recommendation which meets the requirements outlined in 2.04(2)(b), and:

3.02(1)(c)(i) verifies satisfactory completion of the approved program;

3.02(1)(c)(ii) specifies the area(s) of endorsement/specialization completed by the applicant;

3.02(1)(c)(iii) verifies successful completion of student teaching, internship or practicum in a school setting or other appropriate setting in the endorsement/specialization area sought for licensure; and

3.02(1)(c)(iv) certifies that the applicant has demonstrated thorough knowledge of the special service area and has the competencies essential for educational service.

3.02(1)(d) has submitted a complete application for a license as defined in section 2.04 of these rules; and

3.02(1)(e) holds a valid license or certificate in the respective discipline, where applicable, and meets the requirements for the respective discipline as outlined in 1 CCR 301-101 Rules for the Administration of Educator License Endorsements.

13.03 Initial Principal License

An initial principal license is valid for three years from the date of issuance and may be renewed as provided in section 7.01 of these rules.

3.03(1) An initial principal license may be issued to an applicant who:

3.03(1)(a) holds an earned bachelor's or higher degree from an accepted institution of higher education;

3.03(1)(b) has completed an approved principal preparation program at an accepted institution of higher education, including the field-based experience required by section 23-1-121(2)(d), C.R.S., an individualized alternative principal program as defined in sections 22-60.5-305.5 and 22-60.5-111(14), C.R.S., an alternative principal program created by a designated agency and approved by the State Board of Education pursuant to section 22-60.5-305.5(6)(a), C.R.S., or has evidence of partial completion of an approved principal preparation program in each of two or more accepted institutions of higher education. Upon a finding by the Department of completion of the equivalent of any one program by combining work completed at different programs, the requested license may be issued, assuming all requirements set forth in these rules have been met;

3.03(1)(c) has provided an institutional recommendation from the principal preparation program, appropriate to the license sought and on the Department's program verification form, which at a minimum confirms:

3.03(1)(c)(i) the date of completion and verifies satisfactory completion of the approved program;

3.03(1)(c)(ii) specifies the area(s) of endorsement/specialization completed by the applicant;

3.03(1)(c)(iii) verifies successful completion of internship or practicum in a school setting or other appropriate setting in the endorsement/specialization area sought for licensure; and

3.03(1)(c)(iv) certifies that the applicant has demonstrated thorough knowledge of the Principal Quality Standards and has the competencies essential for educational service.

3.03(1)(d) provides documented evidence of three or more years of full-time, successful experience working with students as a licensed or certificated professional in a public or nonpublic elementary or secondary school in this state or another state or has three or more years of experience working with students as a professional in a nonpublic school;

3.03(1)(e) has submitted a complete application for an initial license as defined in section 2.04 of these rules; and

3.03(1)(f) has demonstrated professional competencies as evidenced by a passing score on the approved content test.

3.03(2) An initial principal license must be valid in any school district, BOCES, nonpublic or charter school which provides, participates in or has been granted a waiver from providing an approved induction program for principals as described in section 9.00 of these rules.

3.03(3) An initial principal license must be valid for occasional teaching, which must not constitute more than one-half of a typical teaching assignment.

3.04 Initial Administrator License

An initial administrator license is valid for three years from the date of issuance and may be renewed as provided in section 7.01 of these rules.

3.04(1) An initial administrator license may be issued to an applicant who:

3.04(1)(a) holds an earned bachelor's or higher degree from an accepted institution of higher education;

3.04(1)(b) has completed an approved program for district-level administrators at an accepted institution of higher education or has evidence of partial completion of an approved administrator preparation program in each of two or more accepted institutions of higher education. Upon a finding of completion by the Department of completion of the equivalent of any one program by combining work completed at different programs, the requested license may be issued, assuming all requirements set forth in these rules have been met;

3.04(1)(c) has supplied an institutional recommendation from the preparing administrator preparation program, appropriate to the license sought and on the Department's program verification form, which at a minimum confirms:

3.04(1)(c)(i) the date of completion and verifies satisfactory completion of the approved program;

3.04(1)(c)(ii) specifies the area(s) of endorsement/specialization completed by the applicant;

3.04(1)(c)(iii) verifies successful completion of internship, or practicum in a school setting or other appropriate setting in the endorsement/specialization area sought for licensure; and

3.04(1)(c)(iv) certifies that the applicant has demonstrated thorough knowledge of the Principal Quality Standards and has the competencies essential for educational service.

3.04(1)(d) has submitted a complete application for an initial license as defined in section 2.04 of these rules; and

3.04(1)(e) has demonstrated professional competencies as evidenced by a passing score on the approved content test for administrators.

3.04(2) An initial administrator license must be valid in any school district, BOCES, nonpublic school or charter school, which provides, participates in or has been granted a waiver from providing an approved induction program for administrators as described in section 9.00 of these rules.

3.04(3) A holder of an initial administrator license who has completed three or more years of full-time, continuous, successful experience working with students as a licensed professional in a public or nonpublic elementary or secondary school in this state or another state may function as an occasional teacher. For purposes of this section, occasional teaching is defined as no more than one-half of a typical teaching assignment.

3.04(4) The applicant for an initial administrator license with a director of gifted education endorsement must:

3.04(4)(a) hold a master's or higher degree in gifted education from an accepted institution of higher education or demonstrate knowledge and application of standards for the specialist, as determined upon evaluation by the Department;

3.04(4)(b) have a minimum of two years' full-time experience working with students with exceptional academic and talent aptitude;

3.04(4)(c) have completed an approved program for the preparation of directors of gifted education, which must include a supervised field-based experience, as confirmed on the institutional recommendation from the preparing program;

3.04(4)(d) have demonstrated professional competencies as evidenced by a passing score on the approved content test for administrators; and

3.04(4)(e) meet the professional competencies outlined in section 6.20-6.28.

3.04(5) The applicant for an initial administrator license with a director of special education endorsement must meet requirements as outlined in either pathway detailed in rule 3.04(5)(a) or 3.04(5)(b) below:

3.04(5)(a) holders of a bachelor's's or higher degree in special education from an accepted institution of higher education, or a department-issued special services professional license with endorsement as a speech-language pathologist or school psychologist must:

3.04(5)(a)(i) have a minimum of two years' full-time experience working with students with special needs;

3.04(5)(a)(ii) have completed an approved program for the preparation of directors of special education, which must include a supervised field-based experience, as confirmed on the institutional recommendation from the preparing program;

3.04(5)(a)(iii) have a passing score on the approved content test for administrators; and

3.04(5)(a)(iv) meet the professional competencies outlined in section 6.11-6.19.

3.04(5)(b) holders of a department-issued professional special services license with an endorsement as a school audiologist, counselor, nurse, occupational therapist, orientation and mobility specialist, physical therapist or social worker must:

3.04(5)(b)(i) have five years' full-time experience under the professional license in their specialty;

3.04(5)(b)(ii) have three years' full-time experience as a special education administrator (such as a special education coordinator), which included supervision and evaluation of special education teachers and special service providers;

3.04(5)(b)(iii) have verified experience, supervision and execution of responsibilities for the special education administration as required by the federal Individuals With Disabilities Education Act and Colorado Exceptional Children's Education Act, including:

3.04(5)(b)(iii)(A) special education program supervision and evaluation, funding requirements, budget development, implementation costs and accountability, including maintenance of effort;

3.04(5)(b)(iii)(B) assurance and implementation of Child Find;

3.04(5)(b)(iii)(C) knowledge and understanding of the criteria for special education eligibility categories and special education referral, evaluation, eligibility determination and re-evaluation processes;

3.04(5)(b)(iii)(D) general requirements for the provision of a free and appropriate education and obligations to students with disabilities in all education settings;

3.04(5)(b)(iii)(E) development, implementation and evaluation of Individualized Education Plans, including a strong depth of knowledge in curriculum and instruction as it pertains to the delivery of specially designed instruction as defined in the Individuals With Disabilities Education Act;

3.04(5)(b)(iii)(F) student discipline procedures and confidentiality, procedural safeguards and dispute resolution processes for parents and children;

3.04(5)(b)(iii)(G) the integration of general and special education, including curriculum, instructional strategies, assessments, individualized instruction in support of academic achievement for all students; and

3.04(5)(b)(iii)(H) knowledge and supervision of the birth-21 continuum of services offered by school, district or BOCES; and

3.04(5)(b)(iv) have completed an approved program for the preparation of directors of special education, which must include a supervised field-based experience, as confirmed on the institutional recommendation from the preparing program;

3.04(5)(b)(v) have a passing score on the approved content test for administrators; and

3.04(5)(b)(vi) meet the professional competencies outlined in section 6.11-6.19.

3.05 Professional Teacher or Special Services License

A professional teacher or special services license is valid for a period of seven years from the date of issuance and may be renewed as provided in section 7.02 of these rules.

3.05(1) A professional teacher or special services provider license may be issued to an applicant who:

3.05(1)(a) holds a Colorado initial teacher license or Colorado initial special services license;

3.05(1)(b) has successfully completed an approved teacher or special services provider induction program as prescribed in section 8.00 of these rules and/or has been recommended for the professional teacher or special services license by the district or BOCES providing such induction program; and

3.05(1)(c) has submitted a complete application for a professional teacher or special services license as defined in Rule 2.04.

3.05(2) Notwithstanding the provisions in 3.05(1)(b), the Department may issue a professional teacher license if the applicant meets the requirements for an initial teacher license and previously completed an induction program while teaching under an adjunct instructor authorization, an emergency authorization, an interim authorization, a temporary educator eligibility authorization or alternative teacher license. If the applicant is employed by a school district, charter school, the institute, nonpublic school or BOCES that has obtained a waiver of the induction program requirement, the applicant must demonstrate completion of any requirements specified in the school district's, charter school's, the institute's, nonpublic school's or BOCES's plan for support, assistance and training of an initially licensed educator.

3.05(3) Notwithstanding the provisions in 3.05(1)(b), the Department may issue a professional special services license if the applicant meets the requirements for an initial special services license and previously completed an induction program while serving under an emergency authorization or a temporary educator eligibility authorization. If the applicant is employed by a school district, charter school, the institute, nonpublic school or BOCES that has obtained a waiver of the induction program requirement, the applicant must demonstrate completion of any requirements specified in the school district's, charter school's, the institute's, nonpublic school's or BOCES's plan for support, assistance and training of an initially licensed educator.

3.05(4) Notwithstanding the provisions in 3.05(1), the Department may issue a professional teacher license to an applicant who holds a certificate of apprenticeship completion from an approved teacher degree apprenticeship program.

3.05(5) An applicant for a professional teacher license who did not demonstrate professional competencies prior to obtaining an initial teacher license may demonstrate professional competencies and depth of content knowledge as provided in rule 3.01(1)(e).

3.06 Professional Principal License

A professional principal license is valid for a period of seven years from the date of issuance and may be renewed as provided in section 7.02 of these rules.

3.06(1) A professional principal license may be issued to an applicant who:

3.06(1)(a) holds:

3.06(1)(a)(i) an earned master's degree from an accepted institution of higher education and has successfully completed an approved principal preparation program at an accepted institution of higher education, an alternative principal program or an individualized alternative principal program; and

3.06(1)(a)(ii) an initial principal license;

3.06(1)(b) has successfully completed an approved principal induction program as described in section 9.00 of these rules;

3.06(1)(c) has been recommended for a professional license by the school district(s), BOCES, nonpublic school, charter school or the institute which provided the induction program.

3.06(1)(d) has submitted a complete application for a professional license as defined in Rule 2.04.

3.06(2) Notwithstanding the provisions in 3.06(1)(b), the Department may issue a professional principal license if the applicant meets the requirements for an initial principal license and completed an approved principal induction program while employed under an emergency authorization, interim authorization or principal authorization. The applicant need not complete an approved induction program as an initial principal license-holder if the applicant previously completed an induction program while employed under an emergency authorization, interim authorization, or a principal authorization or if the school district, BOCES, nonpublic school, charter school or the institute in which the applicant is employed has obtained waiver of the induction program requirement pursuant to section 22-60.5-114(2), C.R.S.

3.06(3) A professional principal license is valid for occasional teaching, which must not constitute more than one-half of a typical teaching assignment. A principal who has previously held a professional teacher license may be reissued that license upon application and completion of the renewal requirements as outlined in 7.02.

3.07 Professional Administrator License

A professional administrator license is valid for a period of seven years from the date of issuance and may be renewed as provided in section 7.02 of these rules.

3.07(1) A professional administrator license may be issued to an applicant who:

3.07(1)(a) holds:

3.07(1)(a)(i) an earned master's degree from an accepted institution of higher education and has completed an approved administrator program at an accepted institution of higher education; and

3.07(1)(a)(ii) a valid initial administrator license; and

3.07(1)(a)(ii)(A) completes an approved administrator induction program; and

3.07(1)(a)(ii)(B) has been recommended for professional licensure by the school district, charter school, the institute, nonpublic school or BOCES that provided such an induction program.

3.07(2) Notwithstanding the provisions of section 3.07(1)(a)(ii), the Department may issue a professional administrator license if an applicant meets the requirements for an initial administrator license and completed an approved administrator induction program while employed under an emergency authorization, interim authorization or a temporary educator eligibility authorization. The applicant need not complete an approved induction program as an initial license-holder if the applicant previously completed an induction program while employed under an emergency authorization, interim authorization, or a temporary educator eligibility authorization or if the school district, BOCES, nonpublic school, charter school or the institute in which the applicant is employed has obtained waiver of the induction program requirement pursuant to section 22-60.5-306(1)(b)(C), C.R.S.

3.07(3) A holder of professional administrator licenses who has completed three or more years of full-time, continuous, successful, evaluated experience working with students as a licensed or certificated professional in a public or nonpublic elementary or secondary school in this state or another state may function as an occasional teacher. For purposes of this section, occasional teaching is defined as no more than one-half of a typical teaching assignment.

3.08 Master Certificate - Teacher

A master certificate represents achievements and contributions over and above expectations in the Teacher Quality Standards outlined in section 5.0 of these rules. A master certificate is valid for the period of time for which the applicant's professional teacher license is valid and is renewable as provided in section 7.02(6) of these rules.

3.08(1) A master certificate may be issued to an applicant who holds a valid Colorado professional teacher license and who has demonstrated advanced teaching competencies or expertise through:

3.08(1)(a) the attainment of National Board for Professional Teaching Standards certification; or

3.08(1)(b) demonstrated excellence in the following standards:

3.08(1)(b)(i) Standard 1: The master teacher develops a personal leadership vision focused on the successful learning and development of each student.

3.08(1)(b)(i)(A) Element A: The master teacher develops a leadership mission that promotes whole-child success and the well-being of each student.

3.08(1)(b)(i)(B) Element B: The master teacher articulates, advocates for, and cultivates core values that promote student-centered education, high expectations, learner support, equity, inclusiveness, social justice, openness, caring, trust, and continuous improvement.

3.08(1)(b)(i)(C) Element C: The master teacher strategically develops, implements and evaluates actions to achieve one's personal leadership mission and vision.

3.08(1)(b)(i)(D) Element D: The master teacher anticipates, identifies and addresses barriers to achieving one's leadership vision and mission.

3.08(1)(b)(i)(E) Element E: The master teacher models one's leadership mission, vision and core values in all interactions with students, colleagues, parents and community members.

3.08(1)(b)(ii) Standard 2: The master teacher understands the principles of adult learning and knows how to develop a collaborative culture of collective responsibility in the school. The master teacher uses this knowledge to promote an environment of collegiality, trust and respect that focuses on continuous improvement in instruction and student learning.

3.08(1)(b)(ii)(A) Element A: The master teacher utilizes group processes to help colleagues (for the purposes of this section, including all members of the school community involved in the education of children) work collaboratively to solve problems, make decisions, manage conflict and promote meaningful change.

3.08(1)(b)(ii)(B) Element B: The master teacher models effective skills in listening, presenting ideas, leading discussions, clarifying, mediating and identifying the needs of self and others to advance shared goals and professional learning.

3.08(1)(b)(ii)(C) Element C: The master teacher facilitates the creation of trust among colleagues, development of collective wisdom, building ownership and action that supports collective efficacy and student learning.

3.08(1)(b)(ii)(D) Element D: The master teacher uses knowledge and understanding of different backgrounds, races, ethnicities, cultures, and languages to create an inclusive culture and promote effective interactions among colleagues.

3.08(1)(b)(iii) Standard 3: The master teacher understands how research creates new knowledge, informs policies and practices and improves teaching and learning. The master teacher

models and facilitates the use of systematic inquiry as a critical component of teachers' ongoing learning and development.

3.08(1)(b)(iii)(A) Element A: The master teacher assists colleagues in accessing and using research to select appropriate strategies to improve student learning.

3.08(1)(b)(iii)(B) Element B: The master teacher models and facilitates analysis of student learning data, collaborative interpretation of results and application of findings to improve teaching and learning.

3.08(1)(b)(iii)(C) Element C: The master teacher supports colleagues in collaborating with higher education institutions and other organizations engaged in researching critical education issues.

3.08(1)(b)(iii)(D) Element D: The master teacher teaches and supports colleagues to collect, analyze, and communicate data from their classrooms to improve teaching and learning.

3.08(1)(b)(iii)(E) Element E: The master teacher collaborates with colleagues to identify promising, innovative practices and conduct action research to determine effectiveness and expansion possibilities.

3.08(1)(b)(iv) Standard 4: The master teacher understands the evolving nature of teaching and learning, established and emerging technologies, and the school community. The master teacher uses this knowledge to promote, design and facilitate job-embedded professional learning aligned with school improvement goals.

3.08(1)(b)(iv)(A) Element A: The master teacher collaborates with colleagues and school administrators to plan professional learning that is team-based, job-embedded, sustained over time, aligned with content standards and linked to school/district improvement goals.

3.08(1)(b)(iv)(B) Element B: The master teacher uses information about adult learning to respond to the diverse learning needs of colleagues by identifying, promoting and facilitating varied and personalized professional learning.

3.08(1)(b)(iv)(C) Element C: The master teacher identifies and uses appropriate technologies to promote collaborative and personalized professional learning.

3.08(1)(b)(iv)(D) Element D: The master teacher works with colleagues to collect, analyze, and disseminate data related to the quality of professional learning and its effect on teaching and student learning.

3.08(1)(b)(iv)(E) Element E: The master teacher advocates for sufficient preparation, time, and support for colleagues to work in teams to engage in job-embedded professional learning.

3.08(1)(b)(iv)(F) Element F: The master teacher provides constructive feedback to colleagues to strengthen teaching practice and improve student learning.

3.08(1)(b)(iv)(G) Element G: The master teacher uses information about emerging education, economic, and social trends in planning and facilitating professional learning.

3.08(1)(b)(v) Standard 5: The master teacher demonstrates a deep understanding of the teaching and learning processes and uses this knowledge to advance the professional skills of colleagues by being a continuous learner and modeling reflective practice based on student results. The master

teacher works collaboratively with colleagues to ensure instructional practices are aligned to a shared vision, mission and goals.

3.08(1)(b)(v)(A) Element A: The master teacher models, facilitates and enhances the process for collection, analysis, and use of classroom- and school-based data to identify opportunities to improve curriculum, instruction, assessment, school organization and school culture.

3.08(1)(b)(v)(B) Element B: The master teacher engages in reflective dialogue with colleagues based on student learning and helps make connections to research-based effective practices.

3.08(1)(b)(v)(C) Element C: The master teacher serves as a team leader to harness the skills, expertise, and knowledge of colleagues to address curricular expectations and student learning needs.

3.08(1)(b)(v)(D) Element D: The master teacher uses knowledge of existing and emerging learning innovations to guide colleagues in helping students skillfully and appropriately navigate the universe of knowledge available on the Internet, use social media to promote collaborative learning and connect with people and resources around the globe.

3.08(1)(b)(v)(E) Element E: The master teacher supports instructional strategies that respect issues of diversity and equity in the classroom and that promote equitable outcomes for all students.

3.08(1)(b)(vi) Standard 6: The master teacher is knowledgeable about current research on classroom- and school-based data and the design and selection of appropriate formative and summative assessment methods. The master teacher shares this knowledge and collaborates with colleagues to use assessment and other data to make informed decisions that improve learning for all students and to inform school and district improvement strategies.

3.08(1)(b)(vi)(A) Element A: The master teacher increases the capacity of colleagues to identify and use multiple assessment tools aligned to state and local standards.

3.08(1)(b)(vi)(B) Element B: The master teacher collaborates with colleagues in assessment design, implementation, scoring and interpreting student data to improve educational practice and student learning.

3.08(1)(b)(vi)(C) Element C: The master teacher creates a climate of trust and critical reflection to engage colleagues in challenging conversations about student learning data that lead to solutions to identified issues.

3.08(1)(b)(vi)(D) Element D: The master teacher works with colleagues to use assessment and data findings at multiple levels to promote changes in instructional practices or organizational structures to improve student learning.

3.08(1)(b)(vi)(E) Element E: The master teacher collaborates with colleagues to design opportunities to collect, analyze, and use qualitative data to improve teaching and learning.

3.08(1)(b)(vi)(F) Element F: The master teacher collaborates with colleagues to lead students to evaluate their own data and set relevant goals.

3.08(1)(b)(vii) Standard 7: The master teacher understands that families, cultures, and communities have a significant impact on educational processes and student learning. The master teacher works with colleagues to promote ongoing systematic collaboration with families, community

members, business and community leaders and other stakeholders to improve the educational system and expand opportunities for student learning.

3.08(1)(b)(vii)(A) Element A: The master teacher uses knowledge and understanding of the different backgrounds, ethnicities, races, cultures and languages in the school community to promote effective interactions among colleagues, families and the larger community.

3.08(1)(b)(vii)(B) Element B: The master teacher models and teaches effective communication and collaboration skills with families and other stakeholders focused on attaining equitable achievement for students of all backgrounds and circumstances.

3.08(1)(b)(vii)(C) Element C: The master teacher facilitates colleagues' self-examination of their own biases and understandings of community culture and diversity and how they can develop an asset-oriented mindset along with culturally responsive strategies to enrich the educational experiences of students and achieve high levels of learning for all students.

3.08(1)(b)(vii)(D) Element D: The master teacher develops a shared understanding among colleagues of the diverse educational needs of families and the community.

3.08(1)(b)(vii)(E) Element E: The master teacher collaborates with families, communities, and colleagues to develop comprehensive strategies to address the diverse educational needs of families and the community.

3.08(1)(b)(viii) Standard 8: The master teacher understands how educational policy is made at the local, state, and national level, as well as the roles school leaders, boards of education, legislators and other stakeholders have in formulating those policies.

3.08(1)(b)(viii)(A) Element A: The master teacher shares information with colleagues within and/or beyond the district regarding how local, state and national trends and policies can impact classroom practices and expectations for student learning.

3.08(1)(b)(viii)(B) Element B: The master teacher works with colleagues to identify and use research to advocate for teaching and learning processes that meet the needs of all students.

3.08(1)(b)(viii)(C) Element C: The master teacher collaborates with colleagues to select appropriate opportunities to advocate for the rights and/or needs of students, to secure additional resources within the building or district that support student learning, and to communicate effectively with targeted audiences, such as parents and community members.

3.08(1)(b)(viii)(D) Element D: The master teacher advocates for access to professional resources, including financial support and human and other material resources, that allow colleagues to spend significant time learning about effective practices and developing a professional learning community focused on school improvement goals and student success.

3.08(1)(b)(viii)(E) Element E: The master teacher represents and advocates for the profession in contexts inside and outside of the classroom.

3.09 Master Certificate - Special Services

A master certificate represents achievements and contributions over and above expectations in the Special Services Provider Quality Standards outlined in section 5.0 of these rules. A master certificate is valid for the period of time for which the applicant's professional special services license is valid and is renewable as provided in section 7.02 of these rules.

3.09(1) A master certificate may be issued to an applicant who:

3.09(1)(a) holds a valid Colorado professional special services license and is employed in a school in the area of specialization;

3.09(1)(b) has been involved in ongoing professional development and training;

3.09(1)(c) has demonstrated advanced competencies or expertise as identified by the educator evaluation system employed in the district;

3.09(1)(d) has been recognized for outstanding achievements in the field of specialization; and

3.09(1)(e) meets the following requirements for the area(s) of specialization:

3.09(1)(e)(i) School Audiologist:

3.09(1)(e)(i)(A) holds national certification in audiology;

3.09(1)(e)(i)(B) has completed at least five years of full-time, continuous, successful, evaluated experience as a school audiologist;

3.09(1)(e)(i)(C) has completed graduate-level university training in school audiology and related areas;

3.09(1)(e)(i)(D) has been involved in at least four of the following areas: local, state or national professional organizations; mentoring or supervision of peers; publication; professional presentations; funded grants; professional leadership; community activities and organizations; and

3.09(1)(e)(i)(E) has been granted an exemplary performance evaluation by a team of peers.

3.09(1)(e)(ii) School Counselor:

3.09(1)(e)(ii)(A) has held a Colorado professional special services license in school counseling for a minimum of five years;

3.09(1)(e)(ii)(B) has demonstrated professional growth through continuing education, professional leadership experiences and exceptional program development;

3.09(1)(e)(ii)(C) has demonstrated commitment to the school counseling profession through professional organization involvement, supervision and training of other school counselors, publication of professional materials and presentations at professional conferences; and

3.09(1)(e)(ii)(D) has demonstrated active community involvement, development of effective parent partnership programs and promotion of cooperation with other professional educators.

3.09(1)(e)(iii) School Occupational Therapist:

3.09(1)(e)(iii)(A) holds a master's degree in occupational therapy from an accepted institution of higher education;

3.09(1)(e)(iii)(B) holds an active occupational therapy license from the Colorado Department of Regulatory Agencies;

3.09 (1)(e)(iii)(C) has demonstrated outstanding contribution or accomplishments to the profession through at least three of the following: achieved certification or accreditation in an area of specialization of occupational therapy; supervised and mentored occupational therapy students; completed graduate-level professional coursework; completed research and/or publication in the area of school occupational therapy; made presentations at professional meetings; wrote grants; held or holds office in national, state or local professional organizations or boards;

3.09(1)(e)(iii)(D) has received recognition for outstanding achievements in occupational therapy; and

3.09(1)(e)(iii)(E) is involved in community programs.

3.09(1)(e)(iv) School Orientation and Mobility Specialist:

3.09(1)(e)(iv)(A) has demonstrated outstanding professional activities in at least three of the following areas: authored professional publications; juried articles, newsletters or books; made presentations at professional meetings or conferences; mentored other professionals and supervised student practicum experiences; taught at the university or school district in service levels; served as a model for demonstrations; provided active community leadership by promoting disability education and participation; or wrote grant proposals which were funded; and

3.09(1)(e)(iv)(B) has received recognition for demonstrated leadership in the field.

3.09(1)(e)(v) School Physical Therapist:

3.09(1)(e)(v)(A) holds a master's degree in physical therapy;

3.09(1)(e)(v)(B) holds an active professional physical therapy license from the Colorado Department of Regulatory Agencies;

3.09(1)(e)(v)(C) has demonstrated outstanding contributions or accomplishments to the profession through at least three of the following: achieved certification or accreditation in an area of specialization of physical therapy; supervised and mentored physical therapy students; completed graduate-level professional coursework; completed research and/or publication in the area of school physical therapy; presented at professional meetings; wrote grants; held or holds office in national, state or local professional organizations or boards;

3.09(1)(e)(v)(D) has received recognition for outstanding achievements in physical therapy; and

3.09 (1)(e)(v)(E) has been involved in community programs.

3.09(1)(e)(vi) School Nurse:

3.09(1)(e)(vi)(A) has completed additional preparation in advanced practice in nursing or specialties in school health-related fields or has earned additional certification in nursing administration, vocational education or other certifications applicable to school nursing;

3.09(1)(e)(vi)(B) has demonstrated professional leadership experiences and exceptional program development;

3.09(1)(e)(vi)(C) has mentored school nurses and supervised practicum students;

3.09(1)(e)(vi)(D) has had active participation in school nurse professional organizations; and

3.09(1)(e)(vi)(E) has participated in teaching, research and/or publishing to further the specialty of school nursing.

3.09(1)(e)(vii) School Psychologist:

3.09(1)(e)(vii)(A) has demonstrated commitment to the profession of school psychology through active involvement and leadership in local, state or national school psychology organizations;

3.09(1)(e)(vii)(B) has mentored school psychologists with an initial license and supervised school psychology interns;

3.09(1)(e)(vii)(C) has contributed to school and district program development;

3.09(1)(e)(vii)(D) has produced professional publications and presentations; and

3.09(1)(e)(vii)(E) has received recognition by peers for outstanding performance.

3.09(1)(e)(viii) School Social Worker:

3.09(1)(e)(viii)(A) has demonstrated leadership in state school social work organizations;

3.09(1)(e)(viii)(B) has actively participated in leadership roles in national social work organizations other community and human service organizations;

3.09(1)(e)(viii)(C) holds advanced credentials in the field (e.g., doctorate in social work, school social work specialist credential, diplomate in clinical social work);

3.09(1)(e)(viii)(D) has demonstrated outstanding skill in service to schools and children, such as the creation of innovative and successful programs and services to meet the needs of students and mentoring and supervising school social workers and other school professionals; and

3.09(1)(e)(viii)(E) has received recognition by peers for outstanding performance.

3.09(1)(e)(ix) Speech/Language Pathologist:

3.09(1)(e)(ix)(A) has demonstrated professional growth through professional leadership experiences and exceptional program development;

3.09(1)(e)(ix)(B) has demonstrated commitment through involvement in local, state or national professional organizations;

3.09(1)(e)(ix)(C) has accepted additional responsibilities at the school, district, state or national levels;

3.09(1)(e)(ix)(D) has published appropriate materials at the district, state or national levels;

3.09(1)(e)(ix)(E) has presented original research and materials at professional conferences;

3.09(1)(e)(ix)(F) has supervised practicum and internship students; and

3.09(1)(e)(ix)(G) has mentored and supervised other speech/language pathologists.

3.10 Master Certificate - Principal

A master certificate represents achievements and contributions over and above the expectations in the Principal Quality Standards outlined in section 6.0 of these rules. A master certificate is valid for the period of time for which the applicant's professional principal license is valid and is renewable as provided in section 7.02 of these rules.

3.10(1) A master certificate may be issued to an applicant who:

3.10(1)(a) holds a valid Colorado professional principal license;

3.10(1)(b) has displayed excellence and depth in all of the content and performance standards required for the professional principal license;

3.10(1)(c) displays depth in all content knowledge; has modeled sustained commitment to improved student performance, to ongoing systemic renewal and to strengthening the profession; and has demonstrated superior performance through accomplishments having significant impact on the school's educational community;

3.10(1)(c)(i) The master principal must possess knowledge in the following areas:

3.10(1)(c)(i)(A) systemic renewal strategies;

3.10(1)(c)(i)(B) multiple models for school and district management;

3.10(1)(c)(i)(C) dynamic political and policy movements in the state;

3.10(1)(c)(i)(D) promising practices in the professional development of educational leaders; and

3.10(1)(c)(i)(E) leading research and writing on instructional strategies, student learning, assessment methodology and supervisory techniques.

3.10(1)(c)(ii) The master principal must demonstrate the ability to:

3.10(1)(c)(ii)(A) create a community of learners who focus on student performance;

3.10(1)(c)(ii)(B) translate vision into program excellence;

3.10(1)(c)(ii)(C) provide value-added leadership to create an organization that has purpose, direction and energy;

3.10(1)(c)(ii)(D) implement programs in schools that result in sustained improvement in student performance;

3.10(1)(c)(ii)(E) integrate multiple instructional models to meet diverse learning needs of both students and adults to enhance student performance;

3.10(1)(c)(ii)(F) imagine alternatives based on knowledge of best practices and create those alternatives as a model for others;

3.10(1)(c)(ii)(G) engage a diverse school community in sustained efforts for school improvement;

3.10(1)(c)(ii)(H) influence and provide a model for larger systems (e.g., the district, BOCES or state);

3.10(1)(c)(ii)(I) contribute to the development of the profession through mentoring, teaching, writing and other modalities; and

3.10(1)(c)(ii)(J) capitalize on opportunities presented by diverse stakeholders.

3.10(1)(d) has demonstrated evidence of positive impacts on student performance at the building level; and

3.10(1)(e) has contributed to the education community through service as a mentor, teacher, writer, researcher or other service-oriented activity.

3.11 Master Certificate - Administrator

A master certificate represents achievements and contributions over and above expectations in the Administrator Quality Standards outlined in section 6.0 of these rules. A master certificate is valid for the period of time for which the applicant's professional administrator license is valid and is renewable as provided in section 7.02 of these rules.

3.11(1) A master certificate may be issued to an applicant who:

3.11(1)(a) holds a valid Colorado professional administrator license;

3.11(1)(b) has displayed excellence and depth in all of the content and performance standards required for the professional license;

3.11(1)(c) has demonstrated excellence on all performance standards and displays depth in all content knowledge; has modeled sustained commitment to improved student performance, to ongoing systemic renewal and to strengthening of profession; and has demonstrated superior performance through accomplishments having significant impact on an educational community;

3.11(1)(c)(i) The master administrator must possess knowledge in the following areas:

3.11(1)(c)(i)(A) systemic renewal strategies;

3.11(1)(c)(i)(B) multiple models for school and district management;

3.11(1)(c)(i)(C) dynamic political and policy movements in the state;

3.11(1)(c)(i)(D) promising practices in the professional development of educational leaders;

3.11(1)(c)(i)(E) leading research and writing on instructional strategies, student learning, assessment methodology and supervisory techniques; and

3.11(1)(c)(ii) The master administrator must demonstrate the ability to:

3.11(1)(c)(ii)(A) initiate and sustain significant change in the district directed toward predetermined goals, themes and needs;

3.11(1)(c)(ii)(B) create a community of learners who focus on student performance;

3.11(1)(c)(ii)(C) translate vision into program excellence;

3.11(1)(c)(ii)(D) provide value added leadership to create an organization that has shared purpose, direction and energy;

3.11(1)(c)(ii)(E) provide incentives, direction and motivation for development of programs that enhance student performance;

3.11(1)(c)(ii)(F) imagine alternatives based on knowledge of best practices and create those alternatives as a model for others;

3.11(1)(c)(ii)(G) engage a diverse community in sustained efforts for school improvement in the entire district;

3.11(1)(c)(ii)(H) influence and provide a model for the larger system (e.g., the district, BOCES or state);

3.11(1)(c)(ii)(I) contribute to the development of the profession through mentoring, teaching, writing and other modalities; and

3.11(1)(c)(ii)(J) capitalize on opportunities presented by diverse stakeholders.

3.11(1)(d) has demonstrated evidence of positive impacts on student performance throughout the district; and

3.11(1)(e) has contributed to the education community through service as a mentor, teacher, writer, researcher or other service-oriented activity.

3.12 Alternative Teacher License

An alternative teacher license is valid for either a one-, two- or three-year period, as outlined below. An alternative teacher license authorizes the holder to be employed only as an alternative teacher while participating in an alternative teacher program, pursuant to the terms of an alternative teacher contract, as provided by 22-60.5-201(1)(a), C.R.S.

3.12(1) An alternative teacher license may be issued to an applicant who meets the following criteria:

3.12(1)(a) holds a bachelor's degree from an accepted institution of higher education;

3.12(1)(b) has submitted a complete application as defined in section 2.04 of these rules;

3.12(1)(c) has demonstrated to the state board, in a manner prescribed by rule 3.01(1)(e), subject matter knowledge in the endorsement area; and

3.12(1)(d) provides a statement of assurance signed by the human resources officer or other representative of the designated agency and the applicant verifying that the applicant is enrolled in an approved alternative teacher program, employed as a teacher or participating in a clinical experience, and that the placement is in the endorsement area for which the teacher has demonstrated appropriate subject matter knowledge.

3.12(2) An alternative teacher license is valid as follows:

3.12(2)(a) The alternative teacher license for a one-year program is valid for one year from date of issuance and may be renewed for one additional year, but only upon written evidence of: (1) unforeseen circumstances; and (2) that the employing school district, BOCES, charter school or nonpublic school anticipates extending the alternative teacher's contract for one additional year pursuant to section 22-60.5-207(2), C.R.S.

3.12(2)(b) The alternative teacher license for a two-year program is valid for two years from date of issuance.

3.12(2)(c) A person may be employed as an alternative teacher for a total of three years for the purpose of receiving a special education generalist endorsement.

3.12(3) An alternative teacher license is valid in any school district, BOCES, nonpublic school or charter school.

3.13 Teacher of Record License and Program

3.13(1) **Teacher of Record License.** A teacher of record license is valid for two years from the date of issuance and may be renewed once, but only if the holder did not complete a bachelor's degree due to unforeseen circumstances or hardship.

3.13(1)(a) A teacher of record license may be issued to an applicant who:

3.13(1)(a)(i) is enrolled in an accepted institution of higher education and has no more than 36 credit hours remaining for completion of a bachelor's degree that leads to a teacher license, but has not yet completed field-based experience requirements;

3.13(1)(a)(ii) is enrolled in a one- or two-year Teacher of Record Program pursuant to section 22-60.5-208.7, C.R.S.; and

3.13(1)(a)(iii) is or will be employed by an LEP, in a position for which no other qualified licensed teacher has applied, and for which the LEP has determined that there is a critical teacher shortage as defined in Rule 2.01(17).

3.13(1)(b) The standards and competencies for an individual working under a teacher of record license are those set forth in section 5.0 of these rules.

3.13(1)(c) A teacher of record license may not be issued with an endorsement in special education.

3.13(2) **Teacher of Record Program.** An LEP is authorized to implement a one- or two-year teacher of record program and may employ a teacher of record only when the individual will fill a vacant position in a critical teacher shortage area and when no other qualified, licensed applicants applied for the posted vacant position.

3.13(2)(a) A teacher candidate employed in a teacher of record program established pursuant to this section shall hold a teacher of record license issued pursuant to section 22-60.5-201(1)(a.5), C.R.S., and section 3.13 of these rules.

3.13(2)(b) To assist the teacher of record in meeting the Teacher Quality Standards, established pursuant to section 22-2-109(3), C.R.S., and section 5.0 of these rules, the teacher of record program must include, at a minimum:

3.13(2)(b)(i) Course requirements and provided supports:

3.13(2)(b)(i)(A) identification of the courses and number of credit hours that a teacher candidate must complete before and while a teacher of record,

3.13(2)(b)(i)(B) identification of the time and support (e.g., financial resources, class coverage) the LEP will provide for the teacher of record to complete the coursework;

3.13(2)(b)(i)(C) identification of accepted institution of higher education supports, including a description of how supports will be delivered (e.g., mentoring, professional development, evaluation and LEP-identified supports); and

3.13(2)(b)(ii) professional development, teacher mentorship, the LEP's induction program and other supports for the teacher of record over the course of the program.

3.13(2)(c) If the teacher of record successfully completes an induction program, the teacher of record may apply completion of the induction program toward meeting the requirements for a professional teacher license.

3.13(2)(d) An LEP shall treat a teacher of record as a first-year teacher for purposes of compensation and placement on a teacher salary schedule.

3.13(2)(e) The teacher of record program must be approved by the Department prior to submission of an application for the teacher of record license. At a minimum, the approval process will include review of:

3.13(2)(e)(i) the demonstration of need;

3.13(2)(e)(ii) proposed program details as outlined in section 3.13(2) of these rules;

3.13(2)(e)(iii) the teacher candidate's education, experience and demonstration of content-area competency via an approved content test; and

3.13(2)(e)(iv) assurances from the institution of higher education, LEP and teacher of record candidate.

4.00 Types of Authorizations

The Department is authorized to issue the following authorizations.

4.01 Adjunct Instructor Authorization (Grades K-12)

To address recruiting challenges and establish a diverse workforce, a school district, BOCES or charter school may employ as an adjunct instructor a specialist or content-area expert who is without formal

educator training. The purpose of adjunct instruction is to provide students with highly specialized academic enrichment in support of required content areas.

4.01(1) An adjunct instructor authorization is issued for three years to an applicant who meets the following criteria:

4.01(1)(a) an applicant possesses outstanding talent or demonstrates specific abilities and knowledge in a particular area of specialization;

4.01(1)(b) a school district board of education or superintendent or the principal of a charter school or BOCES requests the applicant's services and provides evidence of the applicant's outstanding talent or specific abilities and particular knowledge for the assignment;

4.01(1)(c) the school district, BOCES, or charter school provides evidence that the applicant's services are required; and

4.01(1)(d) the applicant has been employed for at least five years in the area of specialization or holds an earned bachelor's or higher degree in the area of specialization.

4.01(2) An adjunct instructor authorization may be renewed for succeeding three-year periods at the employing school district's or charter school's request when the school district or charter school provides documented evidence of ongoing need for the adjunct instructor's services.

4.01(3) A person may be employed under an adjunct instructor authorization only by the school district or charter school that requested the person's services.

4.01(4) A person who holds an adjunct instructor authorization and is employed by a school district may teach only under the general supervision of a licensed professional teacher. For the purposes of this provision, "general supervision" means support, mentorship and supervision of an adjunct instructor, and does not require more than one teacher in a classroom at a time.

4.01(4)(a) A school district or charter school shall not employ a person under an adjunct instructor authorization as a full-time teacher; except

4.01(4)(a)(i) a rural school district may employ an adjunct instructor authorization-holder as a full-time teacher if there are no qualified, licensed applicants for the position.

4.02 Special Services Intern Authorization (Birth-21)

A special services intern works under the supervision of a Colorado licensed professional special services provider from the same discipline.

4.02(1) The special services intern authorization may be issued for one academic year. It may only be renewed if the special services intern is employed by a district or BOCES and the intern has not completed the approved program of preparation due to unforeseen circumstances or hardship.

4.02(2) The applicant must hold a bachelor's or higher degree from an accepted institution of higher education and be enrolled in an approved program of preparation for special services providers. The program of preparation must require an internship and offered by an accepted institution of higher education.

4.02(3) For the period of time while the authorization-holder serves as an intern, the authorization-holder may receive pay from the school district.

4.03 Emergency Authorization (Grades K-12)

The applicant for an emergency authorization has not yet met the requirements for a Colorado initial teacher, principal, administrator or special services provider license or a school speech/language pathology assistant authorization but provides evidence of holding an earned bachelor's degree or higher from an accepted institution of higher education and of enrollment in an approved program of preparation.

4.03(1) An applicant for a school speech-language pathology assistant emergency authorization must hold a bachelor's degree in speech, language and hearing sciences; communications disorders-speech sciences; or any other field with completion of 24 semester hours in speech, language hearing sciences from an accepted institution of higher education, as determined by the Department's transcript review.

4.03(2) The emergency authorization may be issued for up to one year and may be renewed for up to one additional year when:

4.03(2)(a) a school district or BOCES requests the emergency authorization in order to employ a non-licensed teacher, principal, administrator or special services provider;

4.03(2)(b) the district provides evidence of a need for specific and essential educational services which can be provided by the applicant, and which would otherwise be unavailable, due to a shortage of licensed educators with appropriate endorsements; and

4.03(2)(c) in the judgment of the State Board of Education,

4.03(2)(c)(i) the employment of the non-licensed applicant is essential to the preservation of the district's instructional program, and

4.03(2)(c)(ii) that the establishment of an alternative teacher program by the local board of education is not a practicable solution to resolve the demonstrated shortage.

4.03(3) The district may provide an induction program for an individual on an emergency authorization, as specified in sections 8.00 and 9.00 of these rules. Induction programs completed while holding an emergency authorization may count toward fulfilling requirements for a professional license.

4.04 Career and Technical Education Authorization (Grades 7-12)

4.04(1) An initial career and technical education (CTE) authorization may be issued for three years and may not be renewed. The applicant must meet the minimum qualifications adopted by the State Board for Community Colleges and Occupational Education under section 23-60-304(3)(a), C.R.S.

4.04(2) A professional career and technical education authorization may be issued for five years to an applicant who holds an initial career and technical education authorization and who meets the necessary requirements for holding a professional-level CTE authorization. It may be renewed for succeeding five-year periods. The applicant must meet the minimum qualifications or renewal requirements that the State Board for Community Colleges and Occupational Education adopts pursuant to section 23-60-304(3)(a), C.R.S.

4.04(3) Postsecondary career and technical education credentials are issued by the Colorado Community College System and are governed by the rules for the Administration of the Colorado Vocational Act, 8 CCR 1504-2.

4.05 Substitute Authorization (Grades K-12)

A substitute authorization may be issued to an applicant to serve as a substitute educator.

4.05(1) A substitute authorization is valid for one, three or five years, as specified below. It may be renewed indefinitely upon application.

4.05(1)(a) A five-year substitute authorization may be issued when an applicant has completed an approved teacher preparation program (as indicated by a signed approved program verification form and conferred transcript) or holds or has held a Colorado initial or professional license or an equivalent out-of-state-issued license.

4.05(1)(b) A three-year substitute authorization may be issued to an applicant who holds an earned bachelor's or higher degree from an accepted institution of higher education.

4.05(1)(c) A one-year substitute authorization may be issued when:

4.05(1)(c)(i) the applicant holds a high school diploma or its equivalent, and

4.05(1)(c)(ii) the applicant attests to having worked successfully with children.

4.06-4.08 Reserved

4.09 Interim Authorization (Grades K-12; Ages Birth-21)

An interim authorization may be issued for one year and may be renewed upon application for one additional year to a person who is:

4.09(1) certified or licensed, or eligible for certification or licensure, as a teacher, principal or administrator in another state and who has not successfully demonstrated professional competencies and depth of content knowledge as outlined in 3.01(1)(e), 3.03 or 3.04 to obtain an initial license but who meets the other requirements for an initial license; or

4.09(2) enrolled in an alternative teacher program as defined in 2.01(6) of these rules and meets the requirements for an alternative teacher license, except that the person has not successfully demonstrated professional competencies and depth of content knowledge as outlined in 3.12(1)(c) to obtain an alternative teacher license.

4.09(3) A holder of an interim authorization must demonstrate professional competencies and depth of content knowledge as specified in 3.01(1)(e), 3.03 or 3.04 to obtain an initial license.

4.09(4) The employing school district may provide an induction program for holders of interim authorizations as specified in sections 8.00 and 9.00 of these rules. Induction programs completed while holding interim authorizations may count toward fulfilling the requirements of a professional license.

4.10 Military Spouse Interim Authorization (Grades K-12, Ages Birth-21)

A military spouse interim authorization is valid for one year, and the Department may renew the authorization for one additional year.

4.10(1) A military spouse interim authorization may be issued to a military spouse when:

4.10(1)(a) the applicant is a spouse of an active-duty member of the United States armed forces who has been transferred to Colorado, is scheduled to be transferred to Colorado, is domiciled in Colorado or has moved to Colorado on a permanent change-of-station basis;

4.10(1)(b) the applicant is certified, licensed or eligible for certification or licensure as a teacher special services provider, principal or administrator in another state; and

4.10(1)(c) the applicant has not successfully demonstrated professional competencies and depth of content knowledge as outlined in 3.01(1)(e), 3.02, 3.03 and 3.04 required for obtaining an initial license but otherwise meets the requirements for an initial license.

4.10(2) A holder of a military spouse interim authorization must demonstrate professional competencies and depth of content knowledge as specified in 3.01(1)(e), 3.02, 3.03 or 3.04 to obtain an initial license.

4.10(3) The employing school district may provide an induction program for holders of military spouse interim authorization as specified in sections 8.00 and 9.00 of these rules. Induction programs completed while holding this authorization may count toward fulfilling the requirements of a professional license.

4.11 School Speech-Language Pathology Assistant Authorization (Ages Birth–21).

A school speech-language pathology assistant (SLPA) serves as a member of an educational team and is authorized to perform tasks prescribed, directed and supervised by a licensed school speech-language pathologist (SLP) in implementing services for children/students with speech, language, cognitive, voice and augmentative/alternative communication disorders and hearing impairments.

4.11(1) An SLPA authorization is valid for five years and may be renewed for succeeding five-year periods upon application and completion of content-related renewal requirements, including 50 contact hours of continuing education.

4.11(1)(a) an applicant for SLPA authorization must: holds a bachelor's degree in speech communication, speech-language pathology, communication disorders-speech sciences or a bachelor's degree in any other field with completion of 24 semester hours in speech language hearing sciences from an accepted institution of higher education, as determined by the Department's transcript review;

4.11(1)(b) have successfully completed a speech-language pathology assistant program at a regionally or nationally accredited institution;

4.11(1)(c) have successfully completed a minimum 100 clock-hours of a school-based practicum under the supervision of an American Speech-Language-Hearing Association-certified and licensed school SLP, in accordance with the requirements of section 4.11(6) below; and

4.11(1)(d) have demonstrated through Department transcript review knowledge in the competencies specified in sections 4.11(3) and 4.11(4) below.

4.11(2) As determined by the Department of Higher Education, the SLPA applicant is knowledgeable about communication processes and basic human communication, and is able to articulate:

4.11(2)(a) the anatomical/physiological, psychological, developmental, linguistic and cultural bases of communication processes;

4.11(2)(b) communication disorders, articulation, fluency, voice and resonance, receptive and expressive language and language-based learning disabilities;

4.11(2)(c) hearing disorders and their impact on speech and language;

4.11(2)(d) cognitive and social aspects of communication disorders;

4.11(2)(e) communication modalities including oral, written, manual, augmentative and alternative communication techniques and assistive technologies;

4.11(2)(f) normal development of reading and writing in the context of the general education curriculum; and

4.11(2)(g) characteristics of exceptional students including categorical disabilities, learning differences and developmental deficits.

4.11(3) The SLPA is knowledgeable about service delivery and must be able to:

4.11(3)(a) use appropriate verbal and written language in interactions with children/students, teachers and related professionals;

4.11(3)(b) follow oral and written directions, including those in intervention plans:

4.11(3)(c) assist in the selection, preparation and presentation of instructional and other related materials;

4.11(3)(d) maintain accurate and concise documentation in a timely manner;

4.11(3)(e) implement documented intervention plans developed by the supervising speech-language pathologist;

4.11(3)(f) assist with clerical duties assigned by the supervising speech-language pathologist including, but not limited to, scheduling, safety/maintenance of supplies and equipment and record keeping;

4.11(3)(g) collect data for quality improvement including child/student performance data in classrooms or individual therapy settings;

4.11(3)(h) record children's/students' each student's status with regard to progress towards established objectives as stated in the intervention plans, and report information to the supervising SLP;

4.11(3)(i) use constructive feedback from the supervising SLP to adapt or modify interaction and/or intervention with children/students;

4.11(3)(j) provide consistent, discriminating and meaningful feedback and reinforcement to the children/students; and

4.11(3)(k) implement designated intervention goals/objectives in specified sequence; and

4.11(3)(l) provide services via telepractice to students as directed by the supervising SLP.

4.11(4) The SLPA is knowledgeable about screening and assessment, but may not perform standardized or non-standardized diagnostic tests, including, but not limited to, feeding evaluations or interpreting test results, and is able to:

4.11(4)(a) assist the SLP during assessment of students (e.g., setting up the testing environment, gathering and prepping material, taking notes as advised by the supervising SLP, etc.);

4.11(4)(b) assist with informal documentation as directed by the SLP;

4.11(4)(c) provide directly to the supervising SLP descriptive behavioral observations that contribute to screening/assessment results; and

4.11(4)(d) support the SLP in research projects, service training and public relations programs, including Child Find activities.

4.11(5) The SLPA is knowledgeable about ethical practice and maintaining appropriate relationships with children/students, families, teachers and related service professionals, and must be able to:

4.11(5)(a) demonstrate respect for and maintain the confidentiality of information pertaining to students and their families;

4.11(5)(b) behave in accordance with educational facility guidelines;

4.11(5)(c) articulate an awareness of student needs and respect for cultural values;

4.11(5)(d) direct student, family and educational professionals to the supervising SLP for information regarding testing, intervention and referral;

4.11(5)(e) request assistance from the supervising SLP, as needed;

4.11(5)(f) manage time effectively and productively; and

4.11(5)(g) recognize personal professional limitations and perform within boundaries of training and job responsibilities.

4.11(6) The SLPA may not counsel parents, but may:

4.11(6)(a) share objective information (e.g., accuracy in speech and language skills addressed, participation in treatment, response to treatment) regarding student performance to students, families, teachers and other service providers without interpretation or recommendations as directed by the supervising SLP; and

4.11(6)(b) provide culturally responsive services while communicating and collaborating with students, families, teachers other service providers and the supervising SLP.

4.12 Exchange Educator Interim Authorization (Grades K-12, Ages Birth-21)

An exchange educator interim authorization may be issued to a participant in a district-recognized educator exchange program who has not completely fulfilled Colorado educator licensure requirements.

4.12(1) An exchange educator interim authorization is valid for one year and may be renewed upon application for one additional year.

4.12(2) Applicants must:

4.12(2)(a) be a participant in a district-recognized educator exchange program; and

4.12(2)(b) be certified, licensed or eligible for certification or licensure as a teacher, special services provider, principal or administrator in another country.

4.13 Temporary Educator Eligibility Authorization (Grades K-12, Ages Birth-8, 5-21, Birth-21)

The Department may issue a temporary educator eligibility (TEE) authorization to a person who is enrolled in an approved program of preparation for a special education educator or who is working to attain a special services provider initial license but who has not yet met the requirements for the applicable initial educator license or endorsement sought.

4.13(1) A TEE authorization is valid for one year. Renewal is contingent upon the applicant maintaining continuous progress toward completion of requirements for the license or endorsement sought. A TEE authorization may be renewed twice, for a total of three years.

4.13(2) A TEE authorization may be issued to an applicant when:

4.13(2)(a) a school district requests the TEE authorization in order to employ as a special education teacher, special services provider or special education administrator an applicant who does not yet meet licensing requirements but who meets the eligibility requirements specified below; and

4.13(2)(b) the district provides evidence of a demonstrated need for specific and essential educational services that can be provided by the applicant but that would be otherwise unavailable to students due to a shortage of licensed educators with appropriate endorsement(s).

4.13(3) TEE applicants must:

4.13(3)(a) hold a bachelor's degree from an accepted institution of higher education; and

4.13(3)(b) be enrolled in an approved or alternative special education, special education director or special services provider preparation program offered by an accepted institution of higher education; or

4.13(3)(c) for school counselor, hold a Department of Regulatory Authority (DORA) license in a counselor-related field and enrolled in prescribed school counselor endorsement coursework to meet requirements for Colorado's school counselor endorsement.

In the preparation program, the candidate must:

4.13(3)(c)(i) receive high-quality professional development that is sustained, intensive, and classroom-focused;

4.13(3)(c)(ii) participate in a program of intensive supervision that consists of structured guidance and regular ongoing support or a mentoring program specific to the license or endorsement sought; and

4.13(3)(c)(iii) demonstrate satisfactory progress toward full licensure (e.g., transcripts demonstrating movement toward the completion of the educator preparation or degree program; documentation verifying attempts to pass the required content exam(s) or documentation of attempts to demonstrate professional competencies and depth of content knowledge through other options under rule 3.01(1)(e) or 3.02).

4.13(3)(d) If an applicant has completed the required program or coursework for licensure or the endorsement sought, the applicant may continue working under a TEE as long as they can provide documentation showing initiation of steps towards demonstrating professional competencies and depth of content knowledge as provided by rule 3.01(1)(e) or 3.02.

4.13(4) In addition to the criteria in 4.13(3), CDE may issue a TEE to an SSP who has met the minimum degree requirements necessary to practice in their area of specialization, but who has not completed the necessary content assessment or school practicum in the area of specialization. A district may employ a person who holds a TEE pursuant to this Rule 4.13(4) only if the person is under the supervision of a professionally licensed person in the same area of specialization.

4.13(5) The employing school district may provide an induction program for an individual on a TEE authorization as specified in sections 8.00 and 9.00 of these rules. Induction programs completed while holding this authorization may count toward fulfilling the requirements of a professional license.

4.14 Educational Interpreter Authorization (Ages Birth-21)

The educational interpreter authorization allows a school district to employ a person to provide teaching and interpreting services for students who are deaf or hard of hearing.

4.14(1) An educational interpreter authorization is valid for five years and may be renewed for succeeding five-year periods upon application and submission of evidence of completion of four (4) semester hours of professional development or its equivalent of 60 contact/clock-hours in educational interpreter content.

4.14(2) The applicant must provide evidence of:

4.14(2)(a) an associate's or higher degree in educational interpreting or a related field;

4.14(2)(b) a certificate of completion for the Educational Interpreter Performance Assessment (EIPA) written exam;

4.14(2)(c) successful performance on one or more of the following professional skill assessments:

4.14(2)(c)(i) for sign language interpreters, a score of 3.5 or higher on the EIPA or current certification with the Registry of Interpreters for the Deaf (RID);

4.14(2)(c)(ii) for cued speech transliterators, a score of 4.0 or higher on the EIPA-Cued Speech exam or a passing score on the Cued Language Transliterator National Certification Exam; or

4.14(2)(c)(iii) for oral interpreters, a current Oral Transliteration Certificate from RID.

4.14(2)(d) demonstration of the following competencies:

4.14(2)(d)(i) effectively analyze communication for the speaker's style, affect, register and overall prosodic and coherence markers;

4.14(2)(d)(ii) effectively manage the interpreting process in order to produce a linguistically appropriate representation of classroom communication, as based on student ability and the individualized education plan (IEP) goals;

4.14(2)(d)(iii) manage the process for effectively switching from one speaker and mode to another;

4.14(2)(d)(iv) utilize attending and interrupting techniques effectively, based on culturally appropriate methods and classroom protocol; and

4.14(2)(d)(v) effectively apply knowledge of:

4.14(2)(d)(v)(A) cognitive processes associated with consecutive and simultaneous interpreting and the implication of each for interpreting classroom discourse;

4.14(2)(d)(v)(B) the differences between classroom discourse and conversational discourse, and the implication of those differences in the interpreting process;

4.14(2)(d)(v)(C) communication processes with inclusive students who are deaf or hard-of-hearing as related, but not limited to, issues of taking turns, avoiding overlap of speaking/signing processes, challenges associated with the use of multimedia and uncaptioned materials; and

4.14(2)(d)(v)(D) classroom subject matter concepts and associated vocabulary and terminology.

4.14(3) Applicants who have yet to take the EIPA performance exam or who are awaiting receipt of their EIPA performance exam results may:

4.14(3)(a) qualify for the authorization by providing evidence of:

4.14(3)(a)(i) an associate's or higher degree in educational interpreting or a related field;

4.14(3)(a)(ii) a certificate of completion verifying a passing score on the Educational Interpreter Performance Assessment (EIPA) written exam;

4.14(3)(a)(iii) successful performance on the CDE-approved Pre-Hire Screening; and

4.14(3)(a)(iv) verification of enrollment in a CDE-approved mentor program.

4.14(3)(b) Within 12 months of the date of application for the authorization, the applicant must submit evidence to CDE of successful performance on one or more of the following professional skill assessments:

4.14(3)(b)(i) for sign language interpreters, a score of 3.5 or higher on the EIPA or current certification with the Registry of Interpreters for the Deaf (RID);

4.14(3)(b)(ii) for cued speech transliterators, a score of 4.0 or higher on the EIPA-Cued Speech exam or a passing score on the Cued Language Transliterator National Certification Exam; or

4.14(3)(b)(iii) for oral interpreters, a current Oral Transliteration Certificate from RID.

4.14(4) Failure to fulfill the requirement outlined in 4.14.(3)(b) of these rules and provide proof of completion to CDE within twelve months of applying for the authorization will render the applicant ineligible for the authorization on the basis that the application is incomplete. CDE will notify the applicant that their application has been deemed incomplete, as provided by Rule 2.04(5). The applicant may cure the deficiency or request reconsideration. An applicant who fails to cure the deficiency or request reconsideration within 60 days of notification will be deemed to have withdrawn the application and such withdrawal shall not be subject to appeal or review. CDE will issue a written determination to an applicant in response to any request for reconsideration within 30 days of its receipt of the request.

4.15 Junior Reserve Officer Training Corps (JROTC) Instructor Authorization (Grades 9-12)

A JROTC instructor authorization may be issued to allow a person to instruct a JROTC unit hosted by a school district.

4.15(1) The JROTC Instructor Authorization is valid for five years and may be renewed upon application and submittal of evidence of service-specific JROTC recertification.

4.15(2) Applicants must provide documented evidence of JROTC certification based upon successful acquisition of service-specific JROTC program director certification or completion of service-specific JROTC preparation program requirements.

4.16 Adult Basic Education Authorization

An adult basic education authorization allows a person to work as an adult basic education instructor in an adult education program operated by a school district before, during, or after regular school hours.

4.16(1) An adult basic education authorization is valid for five years and may be renewed for succeeding five-year periods upon application. To be eligible for renewal, the application must submit evidence of completion of 90 contact hours of adult education instructor professional development activities completed within the period of time for which the authorization was issued.

4.16(2) An adult basic education authorization may be issued to an applicant who:

4.16(2)(a) holds an associate's or higher degree from an accepted institution of higher education or accredited community, technical, or junior college; and

4.16(2)(b) has submitted an application for an adult basic education authorization, which includes:

4.16(2)(b)(i) a copy of an official degree-conferred transcript; and

4.16(2)(b)(ii) evidence of the completion of adult basic education coursework aligned with federal Workforce Innovation & Opportunity Act guidelines, College and Career Readiness Standards for Adult Education and English Language Proficiency Standards for Adult Education, including:

4.16(2)(b)(ii)(A) a copy of an official transcript from an accepted institution of higher education or accredited community, technical or junior college showing the completion of adult basic education coursework within the seven years immediately preceding the date of application. Coursework must include: evidence-based reading instruction; programmatic accessibility; state-standardized assessment and instructional strategies that effectively prepare and support adult learners through transition pathways to college and/or career; teaching adult basic education/adult secondary education; and teaching English as a second language (ESL) to adults; or

4.16(2)(b)(ii)(B) evidence of completion of other adult basic education coursework in lieu of an official transcript showing completion of courses specified in section 4.16(1)(b)(ii)(A). The applicant must submit the Department's equivalency form and copies of official transcripts from an accepted institution of higher education or accredited community, technical or junior college showing coursework completed within the seven years immediately preceding the date of application. The Department will determine whether the coursework is equivalent to that listed in section 4.16(1)(b)(ii)(A).

4.16(3) Applicants who have not met the requirements as specified in section 4.16(2)(b)(ii) may submit evidence of experience, including:

4.16(3)(a) documentation illustrating 750 hours of performance of adult basic education instruction, adult secondary education instruction or ESL instruction to adults; and

4.16(3)(b) the Department's observation form, which includes observations of the applicant's instruction and competencies in adult basic education. The observation form must be completed by a qualified observer as determined by the Department.

4.17 Principal Authorization (Grades K-12)

A principal authorization may be issued to a person who does not hold or may not qualify for an initial principal license but who holds a bachelor's or higher degree from an accepted institution of higher

education and who will be employed by a district, charter school, or nonpublic school under an individualized alternative principal program or who participates in an alternative principal program through a designated agency. A school district may employ a person who holds a principal authorization to perform principal or assistant principal duties only when the authorization-holder is supervised by a professional principal license-holder.

4.17(1) A principal authorization is valid for three years and may not be renewed.

4.17(2) To submit a principal authorization application for an individualized alternative principal program, an applicant, in collaboration with a school district, charter school, nonpublic school or the institute, must submit to the Department documentation pursuant to section 13.01 of these rules.

4.17(3) To submit a principal authorization application for a person participating in an alternative principal program through a designated agency, the applicant must provide documentation of employment as an alternative principal or assistant principal and enrollment in an alternative principal program approved by the Colorado Department of Education pursuant to section 13.02 of these rules.

4.17(4) Upon successful completion of an individualized alternative principal program or alternative principal program, if the principal authorization-holder has three or more years of licensed experience in a school, that person may apply for an initial principal license.

4.17(5) The employer may provide an induction program for an individual working under a principal authorization as specified in section 9.00 of these rules. Induction programs completed while holding this authorization may count toward fulfilling requirements for a professional license.

4.18 Native American Language & Culture Instructor Authorization (Grades K-12)

A Native American language and culture instructor authorization may be issued to a person to provide instruction in the Native American language and culture in which the person has demonstrated expertise.

4.18(1) The Native American language and culture instructor authorization is valid for five years. It may be renewed for succeeding five-year periods upon application and at the request of the school district. The district must submit evidence of continuing need.

4.18(2) To receive a Native American language and culture instructor authorization, the applicant must:

4.18(2)(a) qualify for an adjunct instructor authorization as specified in section 4.01 of these rules;
or

4.18(2)(b) demonstrate expertise in a Native American language of a federally recognized tribe
by:

4.18(2)(b)(i) providing evidence of demonstrated expertise in a Native American language of a federally recognized tribe, as verified by the employing school district;

4.18(2)(b)(ii) identifying a partnering, licensed teacher, as verified by the employing school district; and

4.18(2)(b)(iii) meeting the following objective standards, as verified by the employing school district:

4.18(2)(b)(iii)(A) is able to listen, speak, read and write the Native American language identified at a proficient level for the purposes of interpersonal, interpretive and presentational communication;

4.18(2)(b)(iii)(B) is knowledgeable about the language and related culture, can describe their interrelationships, and is able to articulate to students, other educators and interested stakeholders:

4.18(2)(b)(iii)(B)(I) perspectives related to historic and contemporary ideas, attitudes and values of the Native American culture;

4.18(2)(b)(iii)(B)(II) the practices within the Native American culture that are based on historical, geographical and sociological influences;

4.18(2)(b)(iii)(B)(III) the contributions and achievements of the culture to the fields of literature, the arts, science, mathematics, business, technology and other areas; and

4.18(2)(b)(iii)(B)(IV) the geographic, economic, social and political features of traditional and contemporary cultures associated with the Native American language being taught;

4.18(2)(b)(iii)(C) and is able to create a learning environment that accepts, encourages and promotes the culture and language that Native American language speakers bring into the classroom.

4.18(3) A holder of a Native American language and culture instruction authorization is prohibited from teaching any subject other than the Native American language for which he or she has demonstrated expertise.

4.19 Teacher Apprenticeship Authorization

The department may issue a teacher apprenticeship authorization to a teacher apprentice who is enrolled in a state-approved teacher degree apprenticeship program that allows the teacher apprentice to be employed by a local education provider in roles of increasing responsibility, as specified in section 22-60.5-111(16), C.R.S.

4.19(1) To receive a teacher apprenticeship authorization, a person must:

4.19(1)(a) be employed by a school district, BOCES, charter school or institute charter school as a teacher apprentice;

4.19(1)(b) be actively registered in a teacher apprenticeship program; and

4.19(1)(c) be actively enrolled in an affiliated bachelor's degree program from an accredited institution.

4.19(2) While under the teacher apprenticeship authorization, the following qualification and competencies must be demonstrated through the following allowable roles for a teacher apprentice and aligned to the Teacher Quality Standards (1 CCR 301-37 5.1-5.4):

4.19(2)(a) Level 1: Pre-Apprentice does not require the teacher apprenticeship authorization but may allow for substitute teaching if applicant meets substitute teaching authorization requirements as outlined in section 4.5 of these rules.

4.19(2)(b) Level 2: Beginner Apprentice requires each apprentice either hold a Colorado substitute authorization, obtain Colorado student teaching criminal history record check as outlined in CRS 22-2-119.3 or obtain the teacher apprenticeship authorization.

- 4.19(2)(b)(i) Allowable activities include substitute teaching, student teaching and/or participation in a residency model.
- 4.19(2)(b)(ii) This level requires demonstration of competency in Teacher Quality Standard 2 as determined by the state-approved Teacher Degree Apprenticeship Program.
- 4.19(2)(c) Level 3: Intermediate Apprentice continues Level 2 authorization requirements and allowable student teaching activities and/or participation in a residency model.
- 4.19(2)(c)(i) This level may include starting the required one-year minimum of teacher apprentice working as the teacher of record as required in 22-60.5-111.5(1)(d).
- 4.19(2)(c)(ii) This level requires demonstration of competency in Teacher Quality Standard 1 and in Teacher Quality Standard 3 as determined by the state-approved Teacher Degree Apprenticeship Program.
- 4.19(2)(c)(iii) This level requires demonstration of content competency through passing score on the appropriate state board of education-approved content exam or portfolio equivalents as defined by endorsement area.
- 4.19(2)(d) Level 4: Trained Apprentice will culminate in a minimum of one year as teacher of record as required in 22-60.5-111.5(1)(d) and completion of all Department competencies related to the Teacher Quality Standards, as determined by the state-approved Teacher Degree Apprenticeship Program.
- 4.19(3) A teacher apprenticeship authorization is valid for four years while the apprentice completes the bachelor's degree and on-the-job training requirements of the program.
- 4.19(4) The authorization may be renewed twice, for two-year periods, as necessary for the teacher apprentice to fulfill the apprenticeship requirements.
- 4.19(5) The authorization will be automatically revoked should the apprentice withdraw from the teacher apprenticeship program or from the affiliated bachelor's degree program. The teacher apprenticeship program sponsor may revoke the authorization if the teacher apprentice does not make satisfactory progress in the teacher apprenticeship program, as determined by the employer.
- 4.19(6) When a teacher apprentice withdraws from the teacher apprenticeship program or affiliated bachelor's degree program, the teacher apprenticeship program sponsor must notify CDE of the withdrawal.

5.00 Teacher and Special Services Licensure Standards

Teacher Quality Standards

In addition to a demonstrated understanding of the Colorado Academic Standards; the Colorado Reading To Ensure Academic Development Act (Colorado READ Act); strict data privacy and security practices; special education regulations as outlined in section 23-1-121(2)(c.7), C.R.S.; and professional practices to address multiple pathways for students to be postsecondary and workforce ready as outlined in sections 22-2-106, 22-2-136, 22-7-1003(15), and 22-32-109, C.R.S., the following serve as standards for authorization of programming and content for educator preparation programs and licensing of all teacher candidates in Colorado.

5.01 Quality Standard I: Teachers demonstrate mastery of and pedagogical expertise in the content they teach. The elementary teacher is an expert in literacy and mathematics and is

knowledgeable in all other content that he or she teaches (e.g., science, social studies, the arts, physical education or world languages). The secondary teacher has knowledge of literacy and mathematics and is an expert in the content area(s) in which the teacher is endorsed.

5.01(1) Element A: Teachers provide instruction that is aligned with the Colorado Academic Standards and their district's organized plan of instruction.

5.01(2) Element B: Teachers develop and implement lessons that connect to a variety of content areas/disciplines and emphasize literacy and mathematics.

5.01(3) Element C: Teachers demonstrate knowledge of the content, central concepts, inquiry, appropriate evidence-based instructional practices and specialized characteristics of the disciplines they teach.

5.02 Quality Standard II: Teachers establish a safe, inclusive and respectful learning environment for a diverse population of students.

5.02(1) Element A: Teachers foster a predictable learning environment characterized by acceptable student behavior and efficient use of time, in which each student has a positive, nurturing relationship with caring adults and peers.

5.02(2) Element B: Teachers demonstrate an awareness of, a commitment to and a respect for multiple aspects of diversity, while working toward common goals as a community of learners.

5.02(3) Element C: Teachers engage students as individuals, including those with diverse needs and interests, across a range of ability levels by adapting their teaching for the benefit of all students.

5.02(4) Element D: Teachers work collaboratively with the families and/or significant adults for the benefit of students.

5.03 Quality Standard III: Teachers plan and deliver effective instruction and create an environment that facilitates learning for their students.

5.03(1) Element A: Teachers demonstrate knowledge about the ways in which learning takes place, including the levels of intellectual, physical, social and emotional development of their students.

5.03(2) Element B: Teachers use formal and informal methods to assess student learning and provide feedback, and they use results to inform planning and instruction.

5.03(3) Element C: Teachers utilize appropriate, available technology to engage students in authentic learning experiences.

5.03(4) Element D: Teachers establish and communicate high expectations and support the development of critical-thinking and problem-solving skills.

5.03(5) Element E: Teachers provide students with opportunities to work in teams and develop leadership.

5.03(6) Element F: Teachers model and promote effective communication.

5.04 Quality Standard IV: Teachers demonstrate professionalism through ethical conduct, reflection, and leadership.

5.04(1) Element A: Teachers demonstrate high standards for professional conduct.

5.04(2) Element B: Teachers link professional growth to their professional goals.

5.04(3) Element C: Teachers respond to a complex, dynamic environment.

5.04(4) Element D: Teachers demonstrate leadership in their school, the community and the teaching profession.

Special Services Provider Quality Standards

The following must serve as standards for authorization of program content for educator preparation programs and licensing of all special services candidates. Colorado has identified nine categories of special services providers, referred to as “other licensed personnel” in law and State Board rules. 1 CCR 301-101 further outlines the quality standards and elements applicable to specific special services provider groups , including:

- School Audiologist
- School Occupational Therapist
- School Physical Therapist
- School Counselor
- School Nurse
- School Orientation and Mobility Specialist
- School Psychologist
- School Social Worker
- School Speech-Language Pathologist

5.05 Quality Standard I: Special services providers demonstrate mastery of and expertise in the domain for which they are responsible.

5.05(1) Element A: Special services providers provide services aligned with state and federal laws, local policies and procedures, Colorado Academic Standards, their district’s organized plans of instruction and the individual needs of their students.

5.05(2) Element B: Special services providers demonstrate knowledge of effective services that support learning.

5.05(3) Element C: Special services providers demonstrate knowledge of their professions and integrate evidence-based practices and research findings into their services.

5.06 Quality Standard II: Special services providers support or establish safe, inclusive and respectful learning environments for a diverse population of students.

5.06(1) Element A: Special services providers foster a safe and accessible learning environment characterized by acceptable student behavior and efficient use of time, in which each student has a positive, nurturing relationship with caring adults and peers.

5.06(2) Element B: Special services providers understand and respond to diversity within the home, school and community.

5.06(3) Element C: Special services providers engage students as individuals with diverse needs and interests, across a range of ability levels, by adapting services for the benefit of students.

5.06(4) Element D: Special services providers work collaboratively with the families and/or significant adults for the benefit of students.

5.07 Quality Standard III: Special services providers plan and deliver effective services in an environment that facilitates student learning.

5.07(1) Element A: Special services providers apply knowledge of the ways in which learning takes place, including the appropriate levels of intellectual, physical, social and emotional development of their students.

5.07(2) Element B: Special services providers utilize formal and informal assessments to inform service delivery.

5.07(3) Element C: Special services providers utilize appropriate, available technology to engage students in authentic learning experiences.

5.07(4) Element D: Special services providers establish and communicate high expectations and support the development of critical-thinking, problem-solving and self-advocacy skills.

5.07(5) Element E: Special services providers develop and implement services related to student needs, learning, and progress towards goals.

5.07(6) Element F: Special services providers model and promote effective communication.

5.08 Quality Standard IV: Special services providers demonstrate professionalism through ethical conduct, reflection, and leadership.

5.08(1) Element A: Special services providers demonstrate high standards for ethical and professional conduct.

5.08(2) Element B: Special services providers link professional growth to their professional goals.

5.08(3) Element C: Special services providers respond to a complex, dynamic environment.

5.08(4) Element D: Special services providers demonstrate leadership and advocacy in the school, the community and their profession.

English Language Learner Quality Standards for Teachers and Special Services Providers

In order to ensure that all Colorado educators are well-equipped and able to teach Colorado's diverse student population, all educator pre-service programs, including approved programs of preparation at institutions of higher education and designated agencies providing alternative teacher programs, must ensure the following standards are fully taught and practiced in their programs. The following standards equate to approximately six (6) semester hours or the equivalent of 90 clock-hours.

Note: The following standards are to supplement, not supplant, the culturally and linguistically diverse (CLD) endorsement. These standards can and should be aligned to the CLD endorsement standards as noted in 1 CCR 301-101 if the educator preparation entity is seeking to graduate students with dual endorsements in a content area and in CLD.

5.09 Quality Standard I: Educators are knowledgeable about CLD populations.

5.09(1) Element A: Educators are knowledgeable in and can apply the major theories, concepts and research related to culture, diversity and equity in order to support academic access and opportunity for CLD student populations.

5.09(2) Element B: Educators are knowledgeable in and can use progress monitoring, in conjunction with formative and summative assessments, to support student learning.

5.10 Quality Standard II: Educators should be knowledgeable in first and second language acquisition.

5.10(1) Element A: Educators understand and can implement strategies and select materials to aid in English language and content learning.

5.10(2) Element B: Educators are knowledgeable in and can apply the major theories, concepts and research related to culture, diversity and equity in order to support academic access and opportunity for CLD student populations.

5.11 Quality Standard III: Educators should understand literacy development for CLD students.

5.11(1) Element A: Educators are knowledgeable in and can apply the major theories, concepts and research related to literacy development for CLD students.

5.11(2) Element B: Educators understand and can implement strategies and select materials to aid in English language and content learning.

5.12 Quality Standard IV: Educators are knowledgeable in the teaching strategies, including methods, materials and assessment for CLD students.

5.12(1) Element A: Educators are knowledgeable in, understand and able to use the major theories, concepts, and research related to language acquisition and language development for CLD students.

5.12(2) Element B: Educators are knowledgeable in and can use progress monitoring, in conjunction with formative and summative assessments, to support student learning.

6.00 Principal and Administrator Licensure Standards

Principal Quality Standards

A principal must demonstrate an understanding of the Colorado Academic Standards; the Colorado Reading To Ensure Academic Development Act (Colorado READ Act) including the evidence-based training standards for school administrators as outlined in 1 CCR 301-92, rule 13.01 (D)(1-4); strict data privacy and security practices; special education laws regulations, as outlined in section 23-1-121(2)(c.7), C.R.S.; educator evaluator training standards as outlined in 1 CCR 301-87, rule (5.3)(H)(2)(a)-(e); and professional practices to address multiple pathways for students to be postsecondary and workforce ready, as outlined in sections 22-2-106, 22-2-136, 22-7-1003(15), and 22-32-109, C.R.S. The following standards must guide the development of the content of principal preparation programs offered by accepted institutions of higher education, designated agencies and individualized alternative principal programs and must guide the ongoing professional development of these principals.

6.01 Quality Standard I: Principals demonstrate organizational leadership by strategically developing a vision and mission, leading change, enhancing the capacity of personnel, distributing resources and aligning systems of communication for continuous school improvement.

6.01(1) Element A: Principals collaboratively develop the vision, mission and strategic plan, based on a cycle of continuous improvement of student outcomes, and facilitate their integration into the school community.

6.01(2) Element B: Principals collaborate with staff and stakeholders to implement strategies for change to improve student outcomes.

6.01(3) Element C: Principals establish and effectively manage systems that ensure high-quality staff.

6.01(4) Element D: Principals establish systems and partnerships for managing all available school resources to facilitate improved student outcomes.

6.01(5) Element E: Principals facilitate the design and use of a variety of communication strategies with all stakeholders.

6.02 Quality Standard II: Principals demonstrate inclusive leadership practices that foster a positive school culture and promote safety and equity for all students, staff and community members.

6.02(1) Element A: Principals create a professional school environment and foster relationships that promote staff and student success and well-being.

6.02(2) Element B: Principals ensure that the school provides an orderly and supportive environment that fosters a sense of safety and well-being.

6.02(3) Element C: Principals commit to an inclusive and positive school environment that meets the needs of all students and promotes the preparation of students to live productively and contribute to the diverse cultural contexts of a global society.

6.02(4) Element D: Principals create and utilize systems to share leadership and support collaborative efforts throughout the school.

6.02(5) Element E: Principals design and/or utilize structures and processes which result in family and community engagement and support.

6.03 Quality Standard III: Principals demonstrate instructional leadership by: aligning curriculum, instruction and assessment; supporting professional learning; conducting observations; providing actionable feedback; and holding staff accountable for student outcomes.

6.03(1) Element A: Principals establish, align and ensure implementation of a district/BOCES plan of instruction, instructional practice, assessments and use of student data that result in academic growth and achievement for all students.

6.03(2) Element B: Principals foster a collaborative culture of job-embedded professional learning.

6.03(3) Element C: Principals demonstrate knowledge of effective instructional practice and provide feedback to promote continuous improvement of teaching and learning.

6.03(4) Element D: Principals hold all staff accountable for setting and achieving measurable student outcomes.

6.04 Quality Standard IV: Principals demonstrate professionalism through ethical conduct, reflection and external leadership.

6.04(1) Element A: Principals demonstrate high standards for professional conduct.

6.04(2) Element B: Principals link professional growth to their professional goals.

6.04(3) Element C: Principals build and sustain productive partnerships with key community stakeholders, including public and private sectors, to promote school improvement, student learning and student well-being.

6.05 English Language Learner Principal Quality Standards

In order to ensure that all Colorado school-based leaders are well-equipped and able to support Colorado educators in teaching the state's diverse student population, all principal pre-service programs including approved programs of preparation at Colorado institutions of higher education, designated agencies and individualized alternative principal programs must ensure the standards outlined in sections 5.09 to 5.12 of these rules are fully taught, addressed and practiced in their programs.

6.06 Administrator Quality Standards

An administrator applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education, must have completed an approved administrator program, and must have demonstrated the competencies specified below.

In addition to knowledge of and the ability to demonstrate the requirements in sections 6.01- 6.05 (Principal Quality Standards) of these rules, the following administrator rules describe additional competencies required to lead at the district level and serve as standards for authorization of program content for educator preparation programs preparing administrators and licensing of all administrator candidates.

6.07 Administrators demonstrate organizational leadership, including responsibility for:

- 6.07(1) district/program vision, mission and strategic plan;
- 6.07(2) continual and sustainable district/program improvement;
- 6.07(3) recruitment, development, supervision, evaluation and retention of high-quality personnel;
- 6.07(4) district and community partnerships;
- 6.07(5) communication with internal and external stakeholders;
- 6.07(6) fiscal and resource management, as well as resource-development strategies; and
- 6.07(7) compliance with policies, laws, rules and regulations.

6.08 Administrators demonstrate inclusive leadership practices and systems that include responsibility for:

- 6.08(1) coherent systems of teaching, learning and leading, including curricular and extracurricular activities;
- 6.08(2) positive culture and climate for staff and student success and well-being;
- 6.08(3) safe and orderly environments for the protection and welfare of all;
- 6.08(4) equitable and inclusive practices to address diverse student populations and needs;
- 6.08(5) systems for collaborative and distributed leadership; and

6.08(6) family and community engagement.

6.09 Administrators demonstrate instructional leadership that includes responsibility for:

6.09(1) aligned systems of curriculum, instruction and assessment;

6.09(2) professional learning for all staff that supports student learning;

6.09(3) student outcomes for growth, achievement, engagement and post-secondary and workforce readiness; and

6.09(4) continuous improvement accountability systems (e.g., goal setting, data-informed decisions, multi-tiered systems of support and research-based practices).

6.10 Administrators demonstrate professionalism that includes responsibility for:

6.10(1) ethical behavior and professional norms;

6.10(2) conflict resolution, problem solving and decision making;

6.10(3) board-administrator relationships;

6.10(4) partnerships with internal stakeholders and external organizations; and

6.10(5) democratic and civic participation and advocacy.

6.11 Standards for Professional Competencies for an Initial Administrator License with a Director of Special Education Endorsement

In addition to knowledge of and the ability to demonstrate the requirements in sections 6.06-6.11 of these rules (Administrator Quality Standards), the following standards must be addressed by an accepted institution of higher education's director of special education initial preparation. They are also the standards for the ongoing professional development of these educators. The specific performance indicators for each of these standards must be described in the Department's Performance Indicators for Professional Competency Standards.

6.12 Quality Standard I – Foundations for Leadership: The director of special education must have a solid foundation for leadership by: (a) demonstrating a comprehensive knowledge of special education organization, programs, laws and best practices; and (b) setting high standards and a positive direction for special education consistent with the values, mission and vision of the state and administrative unit.

6.13 Quality Standard II – Special Education and School Systems: The director of special education must demonstrate knowledge of organizational culture, apply a systems approach to the development of special education programs and processes and facilitate effective system change.

6.14 Quality Standard III – Law and Policy: The director of special education is knowledgeable about and able to apply relevant federal and state statutes, regulations, case law and policies that impact all children, including those with disabilities.

6.15 Quality Standard IV – Instructional Leadership: The director of special education is able to integrate general education and special education, including curriculum, instructional strategies, assessments and individualized instruction, in support of academic achievement for all children, including those with disabilities.

6.16 Quality Standard V – Program Planning and Organization: The director of special education is able to evaluate the efficacy and efficiency of special education programs, facilities, services and monitoring systems. The director is able to use the evaluation data to improve the programs and services for all children, including those with disabilities.

6.17 Quality Standard VI – Human Resource Functions: The director of special education must have the knowledge and ability to recruit, retain and evaluate qualified personnel.

6.18 Quality Standard VII – Parent, Family and Community Engagement: The director of special education is knowledgeable about and able to facilitate partnerships and engage parents, families and communities in the implementation of special education programs.

6.19 Quality Standard VIII – Budget and Resources: The director of special education is knowledgeable about and able to demonstrate school district budgeting and resource allocation, including those related to special education.

6.20 Standards for Professional Competencies for an Initial Administrator License with a Director of Gifted Education Endorsement

In addition to knowledge of and the ability to demonstrate the requirements in section 6.06 (Administrator Quality Standards) of these rules, the following standards must be addressed by the director of gifted education initial preparation program offered by accepted institutions of higher education. They must also guide the ongoing professional development of these educators. The director of gifted education must demonstrate the performance indicators specific to gifted education and the Department's Performance Indicators for Professional Competency Standards.

6.21 Quality Standard I - Foundations for Leadership: The director of gifted education is knowledgeable about professional, ethical leadership and supports educators, students, family and community members to effectively address outcomes for gifted learners. The director sets high standards and a positive direction for gifted education consistent with values, mission and vision of the state and administrative unit.

6.21(1) Element A: The director of gifted education demonstrates methods to develop vision, mission, goals and design for gifted education programs.

6.21(2) Element B: The director brings together stakeholders to implement general program and gifted-student goals and best practices in gifted education.

6.21(3) Element C: The director implements collaborative decision-making strategies, as appropriate.

6.21(4) Element D: The director applies knowledge of models and practices in change theory for improvement efforts.

6.21(5) Element E: The director is able to define, advocate for, and make changes with regard to issues in gifted education.

6.22 Quality Standard II - Gifted Education and School Systems: The director of gifted education is knowledgeable about organizational culture, applies a systems approach to the development of gifted education programs and implements processes in order to facilitate effective system change.

6.22(1) Element A: The director of gifted education understands how systems within a district or administrative unit influence gifted-student instruction and performance.

6.22(2) Element B: The director fosters a school and community culture that supports gifted-student programming within and outside the school setting.

6.22(3) Element C: The director applies a systems approach for developing gifted programs to enhance integrated support and service to gifted students and their families.

6.23 Quality Standard III - Law and Policy: The director of gifted education must have comprehensive knowledge and the ability to apply state and federal laws, regulations, case laws and policies that impact all children, including those with exceptional academic and talent aptitude.

6.23(1) Element A: The director of gifted education demonstrates proficiency in gifted education policy, regulations, case law and federal programs supporting key instructional needs of gifted students.

6.23(2) Element B: The director identifies needs and recommends and promotes new policies.

6.23(3) Element C: The director clarifies law and regulations for all stakeholders.

6.23(4) Element D: The director ensures implementation of privacy laws and district confidentiality and privacy policies.

6.23(5) Element E: The director develops, revises, and/or make recommendations to amend school board or administrative unit policy to align with laws and regulations.

6.24 Quality Standard IV - Instructional Leadership: The director of gifted education is able to blend the resources of general and gifted education for the positive benefit of gifted students. The director is knowledgeable about best practices for gifted learners, including specialized curriculum, effective instructional strategies, assessments, social-emotional/affective support and individualized instruction.

6.24(1) Element A: The director of special education demonstrates knowledge of and support for identification methods and procedures.

6.24(2) Element B: The director interprets and shares data to increase the identification of under-identified, underserved populations and aligns professional development initiatives to needs.

6.24(3) Element C: The director understands models of differentiation, acceleration and research-based instructional practices that support rigor, challenge, depth and complexity in instruction and assessment for gifted students.

6.24(4) Element D: The director establishes high expectations for all gifted students and families, including underserved populations and twice-exceptional learners.

6.24(5) Element E: The director monitors standards-based advanced learning plans in order to ensure alignment of programming options to gifted students' needs.

6.24(6) Element F: The director blends the instructional needs of gifted students into the school system.

6.24(7) Element G: The director supports and defends gifted education initiatives within the general education setting.

6.25 Quality Standard V - Program Planning and Organization: The director of gifted education evaluates the efficacy and efficiency of gifted education programming, delivery settings, services and monitoring systems and uses evaluation data to improve the programs and services for all children, including those with exceptional academic and talent aptitude.

6.25(1) Element A: The director of gifted education designs and implements needs-assessments and uses data to inform restructuring or adjustments to gifted programs.

6.25(2) Element B: The director develops and implements action plans for gifted education based upon student outcomes, challenges, root causes, improvement strategies and benchmarks.

6.25(3) Element C: The director is knowledgeable about effective, research-based gifted education models and practices that have positive impacts on gifted students.

6.25(4) Element D: The director supports and/or builds gifted programs that effectively embed district and alternative pathways to college and career outcomes.

6.26 Quality Standard VI - Human resource functions: The director of gifted education is able to recruit, retain, supervise and evaluate qualified personnel.

6.26(1) Element A: The director of gifted education understands educator effectiveness standards in order to observe and evaluate teachers of gifted students.

6.26(2) Element B: The director designs ongoing professional development that increases educators' capacity to understand and address the needs of gifted students.

6.26(3) Element C: The director promotes an understanding and sensitivity toward culture, ethnicity and diversity of language within staff and student body.

6.26(4) Element D: The director understands the skills and knowledge necessary for educators to meet the specific needs of gifted and talented students.

6.27 Quality Standard VII - Parent, Family and Community Partnership: The director of gifted education is knowledgeable about effective communication, decision-making, problem-solving and conflict-resolution strategies. The director must be able to facilitate partnerships and engage parents, families, educators, administrators, students and communities in the implementation of gifted education programs.

6.27(1) Element A: The director of gifted education promotes understanding, resolves conflicts and builds consensus for improving gifted programs.

6.27(2) Element B: The director develops the infrastructure to include parents, families and the community in the gifted education program.

6.27(3) Element C: The director applies methods and systems to maximize parent and family involvement.

6.27(4) Element D: The director implements family partnership practices that support gifted student achievement and school involvement.

6.27(5) Element E: The director cooperatively develops and shares a vision for the district or administrative unit that supports and promotes gifted education.

6.28 Quality Standard VIII - Budget and Resources: The director of gifted education must be able to budget and allocate resources related to gifted education.

6.28(1) Element A: The director of gifted education develops and manages a gifted education budget. The director facilitates stakeholders' involvement in a collaborative budget development process.

6.28(2) Element B: The director leverages resources for gifted education within school systems.

6.28(3) Element C: The director's gifted education budget addresses state requirements.

6.28(4) Element D: The director conducts research and needs assessments in order to accurately identify specific budget needs and promotes initiatives for gifted education funding through grants and other funding opportunities.

7.00 Renewal of Colorado Licenses

The following must serve as standards for the renewal of initial and professional licenses and master certificates and endorsements thereon.

7.01 Initial Licenses

An initial teacher, special services, principal or administrator license and endorsements may be renewed once for a period of three years for applicants who have not completed the requirements for a professional license as specified in sections 3.05-3.07 of these rules. The State Board of Education may renew the license-holder's initial license for one or more additional three-year periods for good cause if the holder is unable to complete an approved induction program for reasons other than incompetence. A renewal request must include a complete application for renewal, payment of the required fee, and a statement concerning the circumstances related to the applicant's inability to complete the induction program.

7.02 Professional Licenses

A professional teacher, special services, principal or administrator license and endorsements may be renewed for a period of seven years upon submission of a complete application for renewal, payment of the required fee and completion of professional development activities that meet the requirements of this section 7.02. To be eligible to renew a professional license, the holder must complete such activities within the period of time for which the professional license is valid or, if expired, within the seven years immediately preceding the date of application. An applicant for renewal must meet the following requirements:

7.02(1) Professional development activities: An educator requesting license renewal must complete professional development activities equivalent to six semester hours or 90 contact hours. Applicants must electronically submit an affidavit attesting to the completion of applicable professional development. Such activities must be related to increasing the license-holder's competence in his or her existing or potential endorsement area; to increasing the license-holder's skills and competence in delivery of instruction in his or her existing or potential endorsement area; to evidence-based practices for teaching reading and literacy; or to culturally and linguistically diverse education. Professional development activities may be selected from one or more of the following:

7.02(1)(a) In-service education: School districts and BOCES are approved entities for in-service education programs. One semester hour of credit may be granted for every 15 contact hours of participation.

7.02(1)(b) College or university credit: College or university credit may be earned from accepted institutions of higher education or accepted community, technical or junior colleges. Courses must be directly related to the standards for professional development as provided in section 7.02 of these rules. Copies of official transcripts may be submitted, in addition to the online affidavit form, as evidence of completion of college/university credit. Though submission of official transcripts is not required, the Department may audit renewal applications to verify college or university credit.

7.02(1)(c) Educational travel: Educational travel must be directly applicable to the endorsement area of the license-holder as documented by the license-holder and accompanied by supervisor verification. One semester hour of credit may be granted for every 15 contact hours of involvement. Travel time to and from the intended destination must not be included in the hours accumulated.

7.02(1)(d) Involvement in school and/or district initiatives: One semester hour of credit may be granted for every 15 contact hours of participation. When verified by the license-holder's supervisor, activities may include, but are not limited to:

7.02(1)(d)(i) membership on school site or district accountability or improvement committee(s);

7.02(1)(d)(ii) curriculum, standards or assessment development or implementation in the license-holder's endorsement area;

7.02(1)(d)(iii) the implementation of standards;

7.02(1)(d)(iv) the development or implementation of evidence-based practices for teaching reading, literacy or numeracy; and

7.02(1)(d)(v) professional development in the area of culturally and linguistically diverse education.

7.02(1)(e) Internships/Externships: Advanced field experiences offered as part of graduate study or other professional training and designed to acquire knowledge or enhance the skills of the educator may qualify as an internship. The internship must be directly related to the standards for professional development as provided in section 7.02 of these rules. One semester hour of credit may be accepted for every 15 contact hours of participation. Official transcripts or supervisor verification must be submitted, in addition to the online renewal summary form, as evidence of completion.

7.02(1)(f) Ongoing professional development and training experiences: Online or in-person professional development confirmed by certificate or documentation of completion or instructor verification, attendance or presentation at professional conferences; service on statewide or national educational task forces or boards; professional research and publication; supervision of student teachers or interns; mentorships; and the pursuit of national educator certification.

7.02(2) For renewal of a professional teacher license, at least 10 of the 90 contact hours of professional development activities required must be related to:

7.02(2)(a) behavioral health training that is culturally responsive and trauma- and evidence-informed; and

7.02(2)(b) increasing awareness of laws and practices relating to educating students with disabilities in the classroom.

7.02(2)(c) The behavioral health training required pursuant to section 7.02(2)(a) may include:

7.02(2)(c)(i) mental health first-aid training, specific to youth and teens;

7.02(2)(c)(ii) training modules concerning teen suicide prevention;

7.02(2)(c)(iii) training on interconnected systems framework for positive behavioral interventions and supports and mental health;

7.02(2)(c)(iv) training approved or provided by the school district where the teacher is employed;

7.02(2)(c)(v) training concerning students with behavioral concerns or disabilities;

7.02(2)(c)(vi) training modules concerning child traumatic stress; and

7.02(2)(c)(vii) any other program or training that meets the requirements of Rule 7.02(2)(a).

7.02(2)(d) The training regarding students with disabilities required pursuant to section 7.02(2)(b) must increase awareness of laws and practices relating to educating students with disabilities in the classroom, including, but not limited to, Child Find and inclusive learning environments.

7.02(3) A teacher may obtain the 10 hours required by section 7.02(2) through any combination of courses as long as that combination includes at least one hour of training in each area. A single professional development course or activity may satisfy both content requirements.

7.02(4) For renewal of a professional special services provider, principal or administrator license, at least 10 of the 90 contact hours of professional development activities required for renewal must be in professional development activities related to increasing awareness of laws and practices relating to educating students with disabilities in the classroom, as described in section 7.02(2)(b).

7.02(5) Professional license-holders must meet the requirement outlined in this section 7.02(2) or 7.02(4), as applicable, during the term of the license, each seven-year renewal cycle except that a professional license-holder who had less than three years left in the license renewal period on June 30, 2020 has until the end of the following applicable renewal period to satisfy the requirements.

7.02(6) Except for the activities undertaken to satisfy the requirements of Rule 7.02(2) and 7.02(4) above, activities completed for professional license renewal must be directly related to one or more of the following standards:

7.02(6)(a) knowledge of subject matter content and learning, including knowledge and application of the Colorado Academic Standards, special education laws and processes, postsecondary workforce readiness, career counseling, multi-tiered systems of support and other appropriate student-based supports;

7.02(6)(b) knowledge of the Teacher and Special Services Provider Quality Standards, Principal Quality Standards and Administrator Quality Standards as outlined in sections 5.00, 6.00 and 6.06 of these rules;

7.02(6)(c) knowledge of the English Language Learner Educator Standards as outlined in sections 5.09-5.12 of these rules;

7.02(6)(d) knowledge of content area endorsement standards as outlined in 1 CCR 301-101;

7.02(6)(e) knowledge of the standards for preparation of Special Education and Gifted Education as outlined in sections 6.08 and 6.17 of these rules;

7.02(6)(f) knowledge of the Colorado Reading to Ensure Academic Development (READ) Act as outlined in 1 CCR 301-92;

7.02(6)(g) effective organization, leadership and management of human and financial resources to create a safe and effective working and learning environment;

7.02(6)(h) awareness of warning signs of dangerous behavior in youth and situations that present a threat to themselves and to the health and safety of students, and knowledge of the community resources available to enhance the health and safety of other students and the school community, youth mental health, safe de-escalation of crisis situations, recognition of signs of poor mental health and substance use, and support of students;

7.02(6)(i) effective teaching of the democratic ideal;

7.02(6)(j) recognition, appreciation and support for ethnic, cultural, gender, economic and human diversity to create inclusive learning environments that foster fair and equitable treatment and consideration for all;

7.02(6)(k) effective communication with students, colleagues, parents and the community;

7.02(6)(l) effective modeling of appropriate behaviors to ensure quality learning experiences for students and for colleagues;

7.02(6)(m) consistently ethical behavior and creation of an environment that encourages and develops responsibility, ethics and citizenship in self and others;

7.02(6)(n) achievement as a continuous learner who encourages and supports personal and professional development of self and others; or

7.02(6)(o) awareness of laws and practices relating to educating students with disabilities in the classroom, including, but not limited to, Child Find and inclusive learning environments.

7.02(7) Professional development activities completed by an applicant for license renewal must apply equally to renewal of any professional educator license or endorsement held by the applicant.

7.02(8) Upon completion of the professional development activities and within the six months prior to the expiration of the professional license(s) to be renewed, the applicant must submit:

7.02(8)(a) a complete application for license renewal, including a signed affidavit in which the license-holder affirms under oath that:

7.02(8)(a)(i) the license-holder satisfactorily completed the ongoing professional development activities specified in the affidavit;

7.02(8)(a)(ii) the activities were completed within the term of the professional license; and

7.02(8)(a)(iii) to the best of the license-holder's knowledge, the activities comply with the requirements of section 7.02 of these rules and section 22-60.5-110, C.R.S.;

7.02(8)(b) a statement of how the activities selected aided the license-holder in meeting the standards for professional educators;

7.02(8)(c) the required evaluation fee;

7.02(8)(d) the oath required in section 2.04(2)(f) of these rules; and

7.02(8)(e) a complete set of license-holder's fingerprints taken by a qualified law enforcement agency, an authorized employee of a school district or Board of Cooperative Services using fingerprinting equipment that meets the Federal Bureau of Investigation image quality standards, or any third party approved by the Colorado Bureau of Investigation, unless the applicant previously submitted a complete

and approved set of fingerprints to the Colorado Bureau of Investigation and satisfactory record of this submission is on file with the Department.

7.02(9) The Department will evaluate the application and supporting evidence and renew the license, request additional information or explanation, or recommend denial of the license renewal if the requirements of section 7.02(4) of these rules are not met.

7.02(10) Master certificates. License-holders who hold master certificates in conjunction with professional licenses may renew the master certification by providing evidence that the license-holder continued to engage in professional development and leadership and continued to demonstrate advanced competencies and expertise during the period in which the master certificate was valid. Master certificates are valid for the period of time for which a professional license is valid and are renewable upon expiration of the license.

7.02(10)(a) Professional development activities for the renewal of master certificates may include but need not be limited to: involvement in school reform efforts; service on state-wide boards or commissions; supervision and mentorship of advanced-level practicum or internship students; advanced study appropriate to standards 5.00 or 6.00 of these rules; and original research and/or publication.

English Language Learner Professional Development

7.02(11) Effective beginning in the 2018-2019 school year and every year thereafter, educators endorsed in elementary, math, science, social studies or English language arts, and seeking a renewal of their professional license, must complete professional development activities equivalent to 45 contact hours or three semester hours in Culturally and Linguistically Diverse (CLD) Education within the seven-year renewal period. The activities must meet or exceed the standards set forth in section 7.02 and in sections 5.09-5.12 of these rules. This requirement must only be completed once. Professional development activities completed to satisfy this requirement may also be counted toward the requirements in section 7.02(1).

7.02(11)(a) Educators may demonstrate knowledge of the standards outlined in sections 5.09-5.12 of these rules in one or in a combination of the following ways:

7.02(11)(a)(i) through a collection of professional development, in-service credit, college/university credit and/or work experience that meet the standards as outlined;

7.02(11)(a)(ii) completion of any Department-approved English Language Learner pathway, which may include district, college or university, BOCES or nonprofit programs;

7.02(11)(a)(ii)(A) Agencies wishing to become an approved pathway may submit an application for approval of an English Language Learner pathway to the Department's Educator Talent Division.

7.02(11)(a)(ii)(B) Approved pathways will be reviewed every three years to ensure consistency and alignment to the standards as noted.

7.02(11)(a)(iii) completion of a Colorado CLD or a related out-of-state endorsement (such as English as a Second Language); and/or

7.02(11)(a)(iv) completion of a Department-facilitated English Language Learner professional development pathway.

7.02(11)(b) A district superintendent annually may request a waiver from the English language learner professional development requirements for their educators endorsed in elementary, math, science, social studies or English language arts if the district has had an average of 2% or fewer identified

English language learners in the three years immediately preceding such request, as identified in the Department's annual Student October Pupil Enrollment data collection.

7.02(11)(c) The principal of a charter school authorized by the institute annually may request a waiver from the English language learner professional development requirements for educators in their charter school authorized by the institute endorsed in elementary, math, science, social studies or English language arts if the charter school has had an average of 2% or fewer identified English language learners in the three years immediately preceding such request as identified in the Department's annual Student October Pupil Enrollment collection.

7.02(11)(d) Upon submission of an application for renewal, license-holders must also submit the superintendent's or institute's notice of request for waiver. The Department will evaluate the waiver request based on the average of the last three years of the English language learner population in the district.

7.03 Appeals Process

An applicant whose application for renewal of any license has been denied by the Department may submit an appeal to the State Board of Education. If the State Board of Education finds that the applicant has met the criteria for license renewal, the Department must approve the license renewal.

7.04 Reinstatement of Expired Licenses or Certificates

An applicant whose previous professional license or certificate was not renewed may reinstate his or her professional license or certificate by:

7.04(1) completing and submitting a renewal application including:

7.04(1)(a) evidence to satisfy the deficiencies that resulted in prior nonrenewal, including, but not limited to, evidence of completion of professional development requirements as provided in section 7.02 of these rules. An applicant seeking reinstatement must have completed professional development activities totaling either six semester hours or 90 clock-hours within the seven-year period preceding the application for reinstatement; and

7.04(1)(b) the renewal fee set by the State Board of Education.

7.04(2) In the event that a license or certificate is expired, the applicant must submit new fingerprints to the CBI and the results must be transferred to the Department, as provided by section 2.04(1) of these rules.

8.00 Approved Induction Programs for Teachers, Special Services Providers and Authorization-Holders

Initial licenses are valid only in school districts, nonpublic schools, BOCES or charter schools that provide approved induction programs unless the State Board of Education has waived the induction program requirement as provided in section 15.00 of these rules. Colorado school districts, consortia of districts, BOCES, nonpublic schools, charter schools, the institute or other educational entities that employ licensed educators (herein referred to as providers for the purposes of this section 8.00 only) may develop induction programs for initial license-holders and holders of authorizations. Induction programs must meet the criteria of these rules and be approved by the Department. The Department may grant initial or continuing approval to induction programs.

Each induction program must conduct a self-evaluation every five years. The evaluation information must be submitted to the Department for use in evaluating renewal of the induction program. The Department may conduct visits to induction sites and survey participants regarding the effectiveness of the program.

8.01 Criteria for Approval and Review of Induction Programs for Teachers

The following must serve as criteria for the approval of induction programs for teachers. The Department must provide technical assistance and support in the development of successful induction programs.

8.01(1) Effective induction programs must include opportunities which:

8.01(1)(a) enhance educator performance according to the quality standards prescribed in section 5.00 of these rules by providing through mentors and other professionals:

8.01(1)(a)(i) demonstrations of high-quality instructional practices;

8.01(1)(a)(ii) improvement of educational experiences for all students; and

8.01(1)(a)(iii) ways to adapt curriculum and instruction to accommodate diverse student populations.

8.01(1)(b) encourage professionalism and educator development by:

8.01(1)(b)(i) building a foundation for the continued study of teaching;

8.01(1)(b)(ii) encouraging collaborative relationships among administrators and teachers and partnerships between providers and universities;

8.01(1)(b)(iii) providing an orientation for teachers to the culture of the provider, the community and the teaching profession;

8.01(1)(b)(iv) providing a thorough orientation to the provider's educator effectiveness evaluation model; and

8.01(1)(b)(v) providing opportunities for professional growth and ongoing professional development and training, including ethics, for both teachers and mentors.

8.01(2) Effective induction programs must establish:

8.01(2)(a) a training program for site administrators in the Colorado Academic Standards, the Teacher Quality Standards and the educator induction process;

8.01(2)(b) standards for the selection and training of mentors who work with teachers;

8.01(2)(c) an assessment model to review, evaluate and guide the induction program;

8.01(2)(d) a process for the selection and training of mentors and for the matching of mentors with inductees;

8.01(2)(e) the primary role of the mentor as coach, advocate, support and guide for teachers; and

8.01(2)(f) whether mentors will be included in the evaluation of inductees. If mentors are to be involved in such evaluations, policies must state the specific roles and responsibilities of the mentor in evaluations.

8.01(3) Effective induction programs must include professional support for inductees that includes:

8.01(3)(a) information relating to the Colorado Academic Standards and Teacher Quality Standards;

8.01(3)(b) detailed information regarding the educator effectiveness evaluation model;

8.01(3)(c) information related to provider's policies and procedures, including how policies, procedures and practices are updated;

8.01(3)(d) the provider's goals and induction program content standards;

8.01(3)(e) educator roles and responsibilities, including moral and ethical conduct;

8.01(3)(f) information about the school community;

8.01(3)(g) substantive feedback to the inductee about performance; and

8.01(3)(h) provisions for the extension of the induction program if deemed necessary by the provider.

8.01(4) Effective induction programs should:

8.01(4)(a) develop plans and policies that:

8.01(4)(a)(i) encourage collaboration between LEP induction programs, professional organizations and institutions of higher education;

8.01(4)(a)(ii) provide release time for both mentors and inductees; and

8.01(4)(a)(iii) provide some form of compensation for mentors.

8.01(4)(b) formalize commitments to:

8.01(4)(b)(i) provide inductees with supervisors and mentors skilled in assisting teachers;

8.01(4)(b)(ii) provide pathways that address potential challenges within the mentor-inductee relationship (e.g., reassignment, conflict management and grievance processes);

8.01(4)(b)(iii) define clear roles and conditions to support school leadership and mentors to work in partnerships focused on improving teacher instructional practice; and

8.01(4)(b)(iv) clarify expectations for inductees and mentors.

8.01(4)(c) adopt guidelines for mentor selection that ensure:

8.01(4)(c)(i) each mentor is an experienced professional who consistently models the quality standards outlined in section 5.00 of these rules and who has demonstrated excellence in practice as measured by the provider's educator effectiveness system; and

8.01(4)(c)(ii) each mentor is skilled in working with adult learners and is sensitive to the viewpoints of others.

8.01(4)(d) adopt guidelines for mentor assignment that ensure:

8.01(4)(d)(i) each mentor is closely matched to the inductee in terms of assignment; and

8.01(4)(d)(ii) each mentor is located, when possible, in close proximity to the inductee.

8.01(5) Effective induction programs should implement best practices, including:

8.01(5)(a) utilizing appropriate needs assessments to identify specific and appropriate programming for inductees;

8.01(5)(b) promoting a sequential learning plan for inductees based on current level of knowledge and skills;

8.01(5)(c) ensuring mentors are onboarded and trained in the components of the induction program;

8.01(5)(d) ensuring, when possible, that mentors do not serve as evaluators;

8.01(5)(e) providing mentors with ongoing professional learning and support for their mentoring activities;

8.01(5)(f) providing communities of practice for mentors, when possible;

8.01(5)(g) ensuring inductees participate in some form of learning community to foster problem-solving and collaborative inquiry; and

8.01(5)(h) engaging in annual program review with all stakeholders to promote systemic change and continuous improvement.

8.02 Criteria for Approval and Review of Induction Programs for Special Services Providers

The following must serve as criteria for the approval of induction programs for special services providers (SSPs). The Department must provide technical assistance in the development of induction programs and disseminate information concerning successful programs.

8.02(1) Effective induction programs must include opportunities for SSPs which:

8.02(1)(a) enhance SSP performance according to the quality standards prescribed in section 5.00 of these rules by providing through mentors and other professionals:

8.02(1)(a)(i) demonstrations of high-quality instructional and/or evidence-based practices specific to the discipline;

8.02(1)(a)(ii) improvement of educational experiences for all students; and

8.02(1)(a)(iii) ways to accommodate diverse student populations.

8.02(1)(b) encourage professionalism and SSP development by:

8.02(1)(b)(i) building a foundation for the continued study of the SSP's discipline;

8.02(1)(b)(ii) encouraging collaborative relationships within the school system and partnerships between providers, institutions of higher education and community organizations;

8.02(1)(b)(iii) providing an orientation for SSPs to the application of the profession in the educational context, including the culture of the school system, the provider and the community;

8.02(1)(b)(iv) providing a thorough orientation to the provider's SSP effectiveness evaluation model; and

8.02(1)(b)(v) providing opportunities for professional growth and ongoing development and training, including ethics, for both SSPs and mentors.

8.02(2) Effective induction programs must establish:

8.02(2)(a) standards for the selection and training of mentors who work with SSPs;

8.02(2)(b) an assessment model to review, evaluate and guide the induction program;

8.02(2)(c) a process for the selection and training of mentors and for the matching of mentors with inductees;

8.02(2)(d) the primary role of the mentor as teacher, coach, advocate, support and guide for SSPs; and

8.02(2)(e) whether mentors will be included in the evaluation of inductees. If mentors are to be involved in such evaluations, policies must state the specific roles and responsibilities of the mentor in evaluations and provide training for mentors in those roles.

8.02(3) Effective induction programs must include professional support for inductees that includes information about:

8.02(3)(a) the SSP quality standards and how specific SSP disciplines interact with the Colorado Academic Standards, Individualized Education Program training and school and special education law as applicable to each discipline;

8.02(3)(b) the provider's SSP effectiveness evaluation model;

8.02(3)(c) the provider's policies and procedures, including how policies, procedures and practices are updated;

8.02(3)(d) the provider's goals and induction program content standards;

8.02(3)(e) SSP roles and responsibilities, including moral and ethical obligations;

8.02(3)(f) the school community;

8.02(3)(g) substantive feedback to the inductee about performance; and

8.02(3)(h) provisions for the extension of the induction program if deemed necessary by the provider.

8.02(4) Effective induction programs:

8.02(4)(a) develop plans and policies that include:

8.02(4)(a)(i) release time for both mentors and inductees; and

8.02(4)(a)(ii) some form of compensation for mentors.

8.02(4)(b): formalize commitments to:

8.02(4)(b)(i) provide inductees with supervisors skilled in helping SSPs and mentors skilled in the specific SSP discipline;

8.02(4)(b)(ii) clarify expectations for inductees and mentors; and

8.02(4)(b)(iii) provide supports that address potential challenges within the mentor-inductee relationship (e.g., reassignment, conflict management and grievance processes).

8.02(4)(c) adopt guidelines for mentor selection that ensure:

8.02(4)(c)(i) each mentor is an experienced professional within the SSP discipline who consistently models the quality standards as reflected in section 5.00 of these rules;

8.02(4)(c)(ii) each mentor is skilled in working with adult learners and is sensitive to the viewpoints of others; and

8.02(4)(c)(iii) the mentor is an active and open learner who is competent in interpersonal skills and has a record of being an ambassador for the provider and the profession; and

8.02(4)(d) adopt guidelines for mentor assignment that ensure:

8.02(4)(d)(i) each mentor is closely matched to the inductee in terms of discipline and assignment; and

8.02(4)(d)(ii) each mentor is located in close proximity to the inductee, when possible, though experience within the SSP discipline may be considered as a priority over proximity to the inductee.

8.02(5) Effective SSP induction programs should implement best practices, including:

8.02(5)(a) utilizing appropriate needs assessments to identify specific and appropriate programming for inductees;

8.02(5)(b) promoting a sequential learning plan for inductees based on current level of knowledge and skills;

8.02(5)(c) providing differentiated, meaningful professional learning related to the specific roles and tasks of the SSP;

8.02(5)(d) cultivating capacity for collaboration and self-advocacy to enhance the working conditions, job satisfaction and efficacy of SSPs;

8.02(5)(e) providing the inductee with a safe, collegial atmosphere where professional growth takes place;

8.02(5)(f) promoting systemic change and continuous improvement, including input from inductees and a program emphasis on student learning; and

8.02(5)(g) ensuring, when possible, that mentors do not serve as evaluators.

9.00 Approved Induction Programs for Principals and Administrators

Initial licenses are valid only in school districts, nonpublic schools, BOCES or charter schools which provide approved induction programs, unless the State Board of Education has waived the induction program requirements as provided in section 15.00 of these rules.

Colorado school districts, consortia of districts, BOCES, nonpublic schools, charter schools, the institute or other educational entities that employ licensed principals and administrators may develop induction programs for initial license-holders and holders of applicable authorizations. Induction programs must meet the criteria of these rules and be approved by the Department. The Department may grant initial or continuing approval for induction programs.

Each induction program must conduct a self-evaluation every five years. The evaluation information must be submitted to the Department for use in evaluating renewal of the induction program. The Department may conduct visits to induction sites and survey participants regarding the effectiveness of the program.

9.01 Criteria for Approval and Review of Induction Programs for Principals and Administrators

The following must serve as criteria for the approval of induction programs for principals, administrators and directors of special and gifted education. Induction programs must follow the same criteria and ensure Quality Standards are met as outlined in sections 6.06 – 6.28. The Department must provide technical assistance and support in the development of successful induction programs.

9.01(1) Effective induction programs must provide inductees:

9.01(1)(a) support for school improvement planning and processes;

9.01(1)(b) support for the application of effective, research-based teaching practices in an emotionally, intellectually and physically safe learning environment;

9.01(1)(c) assistance with systems of collaboration with families, colleagues, instructional teams and the broader educational community to ensure the success of all students;

9.01(1)(d) assistance with development of and advocacy for supportive, inclusive and rigorous learning environments that honor students' diversity; and

9.01(1)(e) training in the legal and ethical obligations of school leaders to support the diverse learning needs of all students.

9.01(2) Effective induction programs must include opportunities for inductees to:

9.01(2)(a) enhance their performance according to the quality standards in section 6.00 of these rules by providing through mentors and other professionals;

9.01(2)(a)(i) orientation to the profession;

9.01(2)(a)(ii) technical skill development;

9.01(2)(a)(iii) professional networking;

9.01(2)(a)(iv) school improvement planning;

9.01(2)(a)(v) leadership development; and

9.01(2)(b) support the application of effective, research-based teaching practices in an emotionally, intellectually and physically safe learning environment.

9.01(3) Effective induction programs must:

9.01(3)(a) train site administrators in the Colorado academic standards adopted by the State Board pursuant to section 22-7-1005, C.R.S. and the principal and administrator quality standards adopted by the State Board pursuant to section 22-9-105.5, C.R.S.;

9.01(3)(b) establish standards for the selection and training of mentors who work with inductees, ensuring that mentors:

9.01(3)(b)(i) have demonstrated leadership and effectiveness as a school principal or district administrator;

9.01(3)(b)(ii) have a deep understanding and knowledge of the Principal Quality Standards;

9.01(3)(b)(iii) exhibit well-developed interpersonal skills, including the ability to empathize with others, listen and question effectively and explore multiple solutions to problems;

9.01(3)(b)(iv) are effective communicators in both oral and written form; and

9.01(3)(b)(v) have a contextual awareness of the political, social and practical realities of the inductee.

9.01(3)(c) establish a process for matching mentors with inductees;

9.01(3)(d) implement a staff development plan to provide mentors with ongoing professional learning and support for their mentoring activities which includes:

9.01(3)(d)(i) skills development as a mentor and coach;

9.01(3)(d)(ii) training in how to support inductee development in the knowledge and skills required in the Quality Standards;

9.01(3)(d)(iii) training in providing effective, growth-producing feedback; and

9.01(3)(e) ensure, when possible that mentors do not serve as evaluators of inductees, if possible.

9.01(3)(e)(i) If mentors are to be involved in such evaluations, policies must state the specific roles and responsibilities of the mentor in evaluations and provide training for mentors in those roles.

9.04 Effective induction programs should:

9.04(1) utilize needs assessments to identify specific needs and design appropriate programming for inductees;

9.04(2) promote a sequential learning plan for inductees based on current level of knowledge and skills; and

9.04(3) engage in annual program review with all stakeholders to promote systemic change and continuous improvement.

10.00 Denial, Suspension, Revocation, or Annulment of Licenses and School District Reporting Requirements

This section establishes a procedure for processing adverse information, which may result in the State Board seeking denial, suspension, revocation or annulment of licenses, including lifetime certificates, endorsements and authorizations. It establishes standards against which said adverse information may be judged. This section also provides due process protections for license-holders and applicants and specifies requirements for school districts' reports to the Department on employee misconduct. For the purpose of this section, "license" means any license, certificate, authorization or endorsement issued by the Department on or after July 1, 1994, pursuant to section 22-60.5-101, C.R.S., and any certificate, letter of authorization, or endorsement issued by the Department on or before June 30, 1994, pursuant to section 22-60-101, C.R.S.

10.00(1) A license may be denied, annulled, suspended or revoked by the State Board of Education in accordance with the State Administrative Procedures Act, sections 24-4-101 through 107, C.R.S., in the following circumstances:

10.00(1)(a) If the applicant obtained or attempts to obtain the license through misrepresentation, fraud, misleading information or an untruthful statement submitted with the intent to misrepresent, mislead or conceal the truth;

10.00(1)(b) If the Department mistakenly issued the license and it is subsequently determined that the holder is not entitled to the license due to a failure to meet educational or non-educational requirements in effect when the license was issued;

10.00(1)(c) When the applicant or holder is or has ever been convicted of, pleads or has ever pled nolo contendere to, or receives or has ever received a deferred sentence for a violation of any one of the following offenses:

10.00(1)(c)(i) contributing to the delinquency of a minor, as described in section 18-6-701, C.R.S.;

10.00(1)(c)(ii) a misdemeanor, the underlying factual basis of which has been found by the court on the record to involve domestic violence, as defined in section 18-6-800.3 (1), C.R.S., and the conviction is a second or subsequent conviction for the same offense;

10.00(1)(c)(iii) misdemeanor sexual assault, as described in section 18-3-402, C.R.S.;

10.00(1)(c)(iv) misdemeanor unlawful sexual conduct, as described in section 18-3-404, C.R.S.;

10.00(1)(c)(v) misdemeanor sexual assault on a client by a psychotherapist, as described in section 18-3-405.5, C.R.S.;

10.00(1)(c)(vi) misdemeanor child abuse, as described in section 18-6-401, C.R.S.;

10.00(1)(c)(vii) a crime under the laws of the United States, another state, a municipality of this state or another state, or any territory subject to the jurisdiction of the United States, the elements of which are substantially similar to one of the offenses described in this paragraph (d); or

10.00(1)(c)(viii) a misdemeanor committed under the laws of the United States, another state, a municipality of another state or any territory subject to the jurisdiction of the United States, the

elements of which are substantially similar to sexual exploitation of children as described in section 18-6-403(3)(b.5), C.R.S.;

10.00(1)(d) When the applicant or holder is or has ever been found guilty of, or pleads or has ever pled guilty or nolo contendere to, a misdemeanor violation of any law of this state or another state, any municipality of this state or another state, or the United States or any territory subject to the jurisdiction of the United States involving the illegal sale of controlled substances, as defined in section 18-18-102(5), C.R.S.;

10.00(1)(e) When the applicant or holder is or has ever been found guilty of a felony, other than a felony described in section 10.00(2) of these rules, or upon the court's acceptance of a guilty plea or a plea of nolo contendere to a felony, other than a felony described in section 10.00(2) of these rules, in this state or under the laws of any other state, the United States or any territory subject to the jurisdiction of the United States, of a crime which, if committed within this state, would be a felony, other than a felony described in section 10.00(2) of these rules, when the commission of said felony, in the judgment of the State Board of Education, renders the applicant or holder unfit to perform the services authorized by his or her license;

10.00(1)(f) When the applicant or holder has ever received a disposition or an adjudication for an offense involving what would constitute a physical assault, a battery or a drug-related offense if committed by an adult and if the offense was committed within the 10 years preceding the date of the license application;

10.00(1)(g) When the applicant or holder is or was charged with having committed a felony or misdemeanor and forfeits or has ever forfeited any bail, bond or other security deposited to secure his or her appearance; pays or has ever paid a fine; enters or has ever entered a plea of nolo contendere; or receives or has ever received a deferred or suspended sentence imposed by the court for any offense described in sections 10.00(2)(a), (b), or (d) of these rules;

10.00(1)(h) Notwithstanding any provision of section 10.00(2) of these rules to the contrary, when the State Board of Education determines an applicant or holder who held a license prior to June 6, 1991, has ever been convicted of an offense described in sections 10.00(2)(a)-(c) of these rules, unless the applicant or holder was previously afforded the rights set forth in section 22-60.5-108, C.R.S., with respect to the offense and the applicant or holder received or retained his or her license as a result;

10.00(1)(i) When the holder, without good cause, resigns or abandons his or her contracted position with a school district without giving written notice to the employing local board of education of his or her intent to terminate his or her employment contract for the succeeding academic year at least 30 days prior to the commencement of the succeeding academic year or the commencement of services under his or her employment contract or without giving written notice to the employing local board of education of his or her intent to terminate his or her employment contract for the current academic year at least 30 days prior to the date he or she intends to stop performing the services required by the employment contract. In this case, the license may be suspended;

10.00(1)(j) When the State Board of Education finds and determines that the applicant or holder is or has ever been professionally incompetent as described in section 10.01 of these rules;

10.00(1)(k) When the State Board of Education finds and determines that the applicant or holder is or has ever been guilty of unethical behavior as described in section 10.02 of these rules; or

10.00(1)(l) When the State Board of Education finds and determines that the license-holder knowingly and intentionally failed to protect student data pursuant to section 22-1-123, C.R.S. In this case, the license may be suspended or revoked for a period not less than 90 days.

10.00(2) A license must be denied, annulled, suspended or revoked by the State Board of Education in accordance with the State Administrative Procedures Act, sections 24-4-101 through 107, C.R.S., in the following circumstances:

10.00(2)(a) A license must be denied, suspended or revoked when the applicant or holder is or has ever been convicted by a jury verdict, by entry of a verdict, by acceptance of a guilty plea or a plea of nolo contendere by a court of:

10.00(2)(a)(i) felony child abuse, as specified in section 18-6-401, C.R.S.;

10.00(2)(a)(ii) a crime of violence, as defined in section 18-1.3-406, C.R.S.;

10.00(2)(a)(iii) a felony offense involving unlawful sexual behavior, as defined in section 16-22-102(9), C.R.S.;

10.00(2)(a)(iv) a felony, the underlying factual basis of which has been found by the court on the record to include an act of domestic violence, as defined in section 18-6-800.3, C.R.S.;

10.00(2)(a)(iv)(A) This ground for mandatory denial, suspension or revocation of a license only applies for a period of five years following the date the offense was committed, provided the applicant or holder has successfully completed any domestic violence treatment required by the court; or

10.00(2)(a)(v) a felony offense in another state, the United States or territory subject to the jurisdiction of the United States, the elements of which are substantially similar to the elements of one of the offenses described in this section 10.00(2)(a).

10.00(2)(b) A license must be denied, suspended or revoked when the applicant or holder is or has ever been convicted by a jury verdict, by entry of a verdict, or by acceptance of a guilty plea or a plea of nolo contendere by a court of indecent exposure, as described in section 18-7-302, C.R.S., or of a crime under the laws of another state, a municipality of this or another state, the United States or a territory subject to the jurisdiction of the United States, the elements of which are substantially similar to the offense of indecent exposure described in this section 10.00(2)(b).

10.00(2)(c) A license must be denied, suspended or revoked when the applicant or holder receives or has ever received a disposition or an adjudication for an offense that would constitute felony unlawful sexual behavior, as defined in section 16-22-102(9), C.R.S., if committed by an adult.

10.00(2)(d) A license must be denied, suspended or revoked if the applicant or holder is or has ever been convicted by a jury verdict, by entry of a verdict, or by acceptance of a guilty plea or a plea of nolo contendere by a court of a felony drug offense described in section 18-18-401, et seq., C.R.S., and committed on or after August 25, 2012, or is convicted of an offense under the laws of another state, the United States, or any territory subject to the jurisdiction of the United States, committed on or after June 11, 2021, the elements of which are substantially similar to a felony drug offense described in part 4 of article 18 of title 18, C.R.S.

10.00(2)(d)(i) This requirement for denial, suspension or revocation of a license only applies for a period of five years following the date the offense was committed.

10.00(2)(e) A license must be denied, suspended or revoked when the applicant or holder fails to submit his or her fingerprints taken by a qualified law enforcement agency, an authorized employee of a school district or Board of Cooperative Services using fingerprinting equipment that meets the Federal Bureau of Investigation image quality standards, or any third party approved by the Colorado Bureau of Investigation to the Department within 30 days after receipt of the Department's written request for fingerprints, which fingerprint submission the Department required upon finding probable cause to believe

that the applicant or holder had been convicted of a felony or misdemeanor, other than a misdemeanor traffic offense or traffic infraction, subsequent to his or her licensure.

10.00(2)(f) A license must be denied, suspended or revoked when the applicant or holder is determined to be mentally incompetent by a court of competent jurisdiction and a court enters, pursuant to section 15-14-301, et seq.; 15-14-401, et seq.; 27-65-109(4); or 27-65-127, C.R.S., an order specifically finding that the mental incompetency is of such a degree that the applicant or holder is incapable of continuing to perform his or her job. In this circumstance, no hearing is required to deny, annul, suspend or revoke the license, notwithstanding section 22-60.5-108, C.R.S.; denial, annulment, suspension or revocation happens by operation of law after the Department gives reasonable notice to the applicant or license-holder.

10.00(3) The State Board of Education may take immediate action to deny, annul or suspend a license without a hearing, notwithstanding the provisions of section 22-60.5-108, C.R.S., upon receipt of a certified copy of the judgment of conviction, a deferred sentence or the acceptance of a guilty plea or a plea of nolo contendere for any violation of sections 10.00(1)(c)-(e) of these rules or upon receipt of a certified copy of the judgment of conviction or the acceptance of a guilty plea or a plea of nolo contendere for any violation of sections 10.00(2)(a)-(d) of these rules. The State Board of Education may revoke a suspended license based on a violation of sections 10.00(1)(c)-(e) of these rules and must revoke a suspended license based on a violation of sections 10.00(2)(a)-(d) of these rules without a hearing and without any further action after the exhaustion of all appeals, if any, or after the time for seeking an appeal has elapsed and upon the entry of a final judgment. A certified copy of the judgment of a court of competent jurisdiction of a conviction, a deferred sentence or the acceptance of a guilty plea or a plea of nolo contendere is conclusive evidence of such conviction or plea for the purposes of sections 10.00(1)(c)-(e) of these rules. A certified copy of the judgment of a court of competent jurisdiction of a conviction or the acceptance of a guilty plea or a plea of nolo contendere is conclusive evidence of such conviction or plea for the purposes of sections 10.00(2)(a)-(d) of these rules.

10.00(4) In cases where the State Board of Education deems summary suspension is appropriate, pursuant to section 24-4-104(4), C.R.S., proceedings for suspension or revocation may be instituted upon the Board's own motion without a proceeding pursuant to these regulations. The holder is entitled to a post-deprivation hearing consistent with section 24-4-105, C.R.S. At such hearing, the burden of proof rests with the license-holder.

10.01 Standards of Professional Incompetence

The following serve as standards against which charges of professional incompetence will be judged. To warrant denial, annulment, suspension or revocation of the license, violations must be found to be substantial or continued, as well as related to services rendered within the scope of the license. It is considered professional incompetence for a license-holder or applicant to:

10.01(1) willfully depart or to have ever willfully departed from the quality standards described in sections 5.00 or 6.00 of these rules;

10.01(2) willfully fail or to have ever willfully failed to practice with reasonable skill and safety;

10.01(3) act or to have ever acted in a manner evidencing a clear and substantial lack of knowledge, ability or fitness to perform the services rendered within the scope of the license;

10.01(4) refuse or to have ever refused to perform duties required by federal and state law and regulation;

10.01(5) recklessly disregard or to have ever recklessly disregarded duties required by federal and state law and regulation;

10.01(6) have or to have ever had a mental or physical condition, as diagnosed by a professional competent to make such a diagnosis, that results in the license-holder's or applicant's inability to satisfactorily perform required duties, subject to the American with Disabilities Act of 1990, Section 504 of the Rehabilitation Act of 1973, and other nondiscrimination law; or

10.01(7) habitually abuse or to have ever habitually abused alcoholic, narcotic, hypnotic or other substances, the abuse of which results in the license-holder's or applicant's inability to satisfactorily perform required duties, subject to the American with Disabilities Act of 1990, Section 504 of the Rehabilitation Act of 1973, and other nondiscrimination law.

10.02 Standards of Unethical Behavior

The following serve as standards against which charges of unethical behavior will be judged. To warrant denial, annulment, suspension or revocation of the license, violations must be found to be substantial or continued. It is considered unethical behavior for a license-holder or applicant to:

10.02(1) fail or to have ever failed to make reasonable effort to protect a minor from conditions harmful to health and safety;

10.02(2) provide or to have ever provided professional services in a discriminatory manner regarding age, gender, gender identity, sexual orientation, national origin, race, ethnicity, color, creed, religion, language, disability, socio-economic status or marriage status;

10.02(3) fail or to have ever failed to keep in confidence information obtained in the course of professional services, unless disclosure serves to protect the child, other children or school personnel is required by law;

10.02(4) direct or to have ever directed a person to carry out professional responsibilities knowing that such person is not qualified for the responsibility given, except for assignments of short duration in emergency situations;

10.02(5) deliberately distort or suppress or to have ever deliberately distorted or suppressed curricular materials or educational information in order to promote their own personal view, interest or goal;

10.02(6) falsify or misrepresent or to have ever falsified or misrepresented records or facts relating to the license-holder or applicant's qualifications, another educator's qualifications or a student's records;

10.02(7) make or to have ever made false or malicious statements about students or school personnel;

10.02(8) using one's position for personal gain;

10.02(9) fail or to have ever failed to conduct financial transactions relating to the school program in a manner consistent with applicable law, rule or regulation;

10.02(10) engage or to have ever engaged in immoral conduct that affects the health, safety or welfare of children; conduct that offends the morals of the community; or conduct that sets an inappropriate example for children or youth whose ideals the educator is expected to foster and elevate;

10.02(11) engage or to have ever engaged in unlawful distribution or sale of dangerous or unauthorized prescription drugs or other dangerous nonprescription substances, alcohol or tobacco; or

10.02(12) engage or to have ever engaged in a sexual act, meaning sexual contact, sexual intrusion or sexual penetration as defined in section 18-3-401, C.R.S., with a student enrolled at the school where the

license-holder or applicant is or was employed at the time of the sexual act, including a student who is eighteen years of age or older, regardless of whether the student consented to the sexual act.

10.03 Filing of Adverse Information Regarding an Educator License

10.03(1) Filing of external complaints:

10.03(1)(a) A complaint regarding an educator is a formal statement, filed by an aggrieved party or a party in interest against an individual who holds or has applied for an educator license, of an alleged violation of conditions that, if found to be substantial or continued, and if found to be true, becomes grounds for denying, annulling, revoking or suspending the license. The Department must supply necessary complaint forms and information for the filing of adverse information.

10.03(1)(b) The complainant must personally deliver, send by mail or send in a secured electronic environment the complaint to the Department. The complainant must sign and swear to the complaint, regardless of delivery method. The complaint must allege actions serving as the basis of the complaint, and the alleged actions must be substantial or continued. The complaint must specify the statutory and regulatory violations.

10.03(2) Filing of notification by public district/school:

10.03(2)(a) The local board of education, charter school, BOCES or its designee must notify the Department pursuant to the requirements of section 10.05 of these rules.

10.03(3) Conducting investigations and pursuing formal action by the State Board of Education:

10.03(3)(a) The Department conducts background investigations upon receipt of any adverse information. The purpose of this inquiry is to determine if there is probable cause to seek annulment, revocation or suspension of the license or denial of the application. If the Department determines probable cause exists, the Department may ask the State Board of Education to direct the initiation of formal proceedings against the license-holder pursuant to section 22-60.5-108, C.R.S., or to deny the application pursuant to section 24-4-104(8), C.R.S.

10.03(3)(b) Except in cases of summary suspension, the Department must provide the license-holder or applicant notice of the allegations against him or her and an opportunity to respond prior to asking the State Board of Education to deny an application or initiate formal proceedings. The Department must provide such an opportunity by sending a formal written letter of inquiry by first-class mail to the applicant or license holder, explaining the allegations, requesting a response within 20 days, and notifying them of their right to return a response within 20 days. If the Department knows that the person is an employee of a Colorado charter school, BOCES or school district, the Department must notify the charter school, BOCES or school district of the inquiry.

10.03(3)(c) After the expiration of the 20-day response period or upon receipt of the response, whichever is sooner, the Department will review the allegations and response and determine whether to pursue the charges for denial, revocation or annulment of the license. In any case where, based on the response, the Department determines probable cause does not exist, the Department must withdraw or dismiss the complaint and notify the person complained against and the school district, charter school or BOCES of the Department's action. Any handling of the complaint must be consistent with the laws on confidentiality unless contrary to statute.

10.03(3)(d) The Department is authorized to grant extensions to any of the processing deadline dates in sections 10.03(3)-(4) of these rules, based upon sufficient cause shown.

10.03(3)(e) The Department will present its findings and recommendations to the State Board of Education for action.

10.03(3)(e)(i) If the Department recommends revocation or annulment and the State Board of Education accepts that recommendation, the Board must refer the matter for a hearing in accordance with section 24-4-105, C.R.S. The Department must notify by first-class mail the person charged of the State Board of Education's decision to refer the matter for a hearing. If the State Board of Education rejects the Department's recommendation, the Department must dismiss the complaint and notify the person complained against and the complainant of the Department's action. Any handling of the complaint must be consistent with the laws on confidentiality unless contrary to statute.

10.03(3)(e)(ii) If the Department recommends denial and the State Board of Education accepts that recommendation, the Department must notify by first-class mail the applicant of the denial and the applicant's right to request a hearing conducted in accordance with section 24-4-105, C.R.S. If the State Board of Education rejects the Department's recommendation, the Department must clear the application and issue the credential to the applicant.

10.03(3)(f) If the State Board of Education refers the matter for a hearing and if the Department knows that the person charged is a current employee of a Colorado charter school, BOCES or school district, the Department must notify such school, BOCES or school district of the State Board of Education's decision.

10.03(3)(g) If the State Board of Education refers the matter for a hearing, or if the applicant timely requests a hearing concerning the Board's denial of his or her application, the hearing and subsequent proceedings must be conducted by an administrative law judge appointed by the Colorado Division of Administrative Hearings in accordance with section 24-4-105(3), C.R.S..

10.03(3)(h) Pursuant to section 24-4-105(14), C.R.S., the decision of the administrative law judge must include a statement of findings and conclusions and the appropriate order, sanction, relief or denial thereof. If the administrative law judge sustains the charge, the decision must result in revocation or denial of the license.

10.04 Application for License Following Suspension, Revocation, Annulment, or Denial

10.04(1) A license-holder whose license has been suspended or revoked may submit an application for a new license, the renewal of the expired license, or the reinstatement of the license to the Department and for review by the State Board of Education. The application must include justification for license issuance, renewal or reinstatement, with evidence as to rehabilitation appropriate to the basis for the prior suspension or revocation. The application must demonstrate the current fitness of the applicant to resume educational duties, in accordance with all laws and rules. The burden of proof rests with the applicant.

10.04(1)(a) The reinstated license will bear the same expiration date as had been originally issued.

10.04(1)(b) In the event the original license expired during the period of suspension or revocation, the applicant will be required to meet all requirements for the renewal of the license.

10.04(2) An applicant whose license application has been denied or annulled by the State Board of Education may apply for a license to the Department and for review by the State Board. The application will include justification for issuance, with appropriate supporting documentation as to the current fitness of the applicant to resume educational duties, in accordance with all laws and rules. The burden of proof must rest with the applicant.

10.05 Mandatory Reporting of Misconduct

10.05(1) The local board of education, charter school, BOCES or designee must notify the Department within 10 business days of any employee's dismissal or resignation if the dismissal or resignation is based on an allegation of unlawful behavior involving a child, including unlawful sexual behavior or allegation of a sexual act (meaning sexual contact, sexual intrusion or sexual penetration as those terms are defined in section 18-3-401, C.R.S.) involving a student who is eighteen years of age or older, regardless of whether the student consented to the sexual act, that is supported by a preponderance of the evidence. The local board, charter school, BOCES or designee must provide any information requested by the Department concerning the circumstances of the dismissal or resignation.

10.05(2) The local board of education, charter school, BOCES or designee must immediately notify the Department when any employee's resignation or dismissal is based upon a conviction, guilty plea, plea of nolo contendere or deferred sentence as set forth in sections 10.00(1)(d)-(g) and 10.00(2)(a)-(c) of these rules. The local board, charter school, BOCES or designee must provide any information requested by the Department concerning the circumstances of the employee's dismissal or resignation.

10.05(3) The local board of education, charter school, BOCES or designee must notify the Department when the county department of social services or local law enforcement agency reasonably believes that an incident of abuse or neglect has occurred and an employee of the district, charter school or BOCES is the suspected perpetrator and was acting in his or her official capacity as an employee. The local board, charter school, BOCES or its designee must provide any information requested by the Department concerning the employee's alleged abuse or neglect.

10.05(4) The local board of education, charter school, BOCES or designee must notify the Department when it reasonably believes that one of its employees is guilty of unethical behavior or professional incompetence as set forth in sections 10.01 and 10.02 of these rules. The local board, charter school, BOCES or its designee must provide any information requested by the Department concerning the employee's behavior or competence.

10.05(5) The local board of education, charter school, BOCES or designee must notify the Department when it learns from a source other than the Department that a current or past employee has been convicted of, has pled nolo contendere to or has received a deferred sentence or deferred prosecution for a felony or a misdemeanor crime involving unlawful sexual behavior or unlawful behavior involving children.

10.06 Mandatory Disclosure of Attempts to Seal Criminal Records

An applicant or license-holder who files a petition to seal a criminal record under § 24-72-701, et seq., C.R.S., must notify the Department of the pending petition to seal. The Department may inquire into the facts of the criminal offense(s) for which the petition to seal is pending under § 24-72-703(2)(d)(III), C.R.S. The applicant or license-holder does not have any right to privilege or privilege that justifies refusal to answer the Department's questions about the criminal offense(s) at issue in the petition to seal.

11.00 Standards for the Approval of Educator Preparation Programs

The Department will review, authorize and approve educator preparation programs at Colorado public, private and proprietary institutions of higher education based on the identified requirements for approval under section 22-60.5-121, C.R.S.

The Department's Educator Talent Division promotes high-quality programs that meet the requirements, policies and the best practices identified by the Department of Education and Department of Higher Education pursuant to sections 22-2-109, C.R.S., 22-60.5-121, C.R.S. and 23-78-104, C.R.S.

Pursuant to 22-60.5-121, C.R.S and the standards set forth in sections 5.00 and 6.00 of these rules and sections 4.00 through 7.00 of 1 CCR 301-101, the State Board of Education will review all educator preparation programs, including traditional and alternative programs, to ensure that each program meets the minimum requirements in § 22-60.5-121, C.R.S., rules 11 and 13 of these rules, and that the programs are implemented in a way that enables educator candidates to meet the quality standards for the applicable license and requirements for licensure endorsement.

11.01 Program Review by the Department's Educator Talent Division

11.01(1) The Educator Talent Division's program review must ensure that each program is designed and implemented in a manner that will enable a candidate to meet licensure and endorsement requirements. Rule outlined below apply to both educator preparation programs at institutions of higher education and alternative preparation programs.

11.01(2) For the reauthorization of educator preparation programs at Colorado's public, private or proprietary postsecondary institutions of higher education recognized by the Colorado Department of Higher Education, the Educator Talent Division will provide the State Board of Education information for its consideration as to whether the Board should issue an approval, conditional approval, probation or termination.

11.01(3) For alternative teacher programs and alternative principal programs, the State Board of Education will determine full reauthorization, conditional reauthorization, probationary reauthorization or termination of the program.

11.01(3)(a) An on-site evaluation for the reauthorization of alternative preparation programs will occur no more frequently than once every five years.

11.01(3)(b) An initial site visit and review will be conducted 12 to 24 months after approval for all newly authorized alternative preparation programs.

11.02 Standards for Educator Preparation Programs and Alternative Preparation Programs

The following must serve as standards for the initial and continuing approval of all preparation programs.

11.20(1) An educator preparation program and an alternative program must:

11.02(1)(a) Be designed around candidate proficiency and professionalism that supports decision-making about partnerships and the integration of curricula, learners, coursework and clinical experience;

11.02(1)(b) Map, plan, develop, assess and support candidate proficiency, including

11.02(1)(b)(i) a candidate's deep understanding of content knowledge, pedagogical knowledge, the content knowledge required for educating students and the dispositions and professional qualities necessary to be a successful educator;

11.02(1)(b)(ii) comprehensive, ongoing assessment including evaluation of each candidate's subject matter (as outlined in the endorsement standards in sections 4.00 through 7.00 of 1 CCR 301-101) and professional knowledge and ability to demonstrate skill in applying the professional knowledge base (as outlined in the quality standards specified in sections 5.00 and 6.00 of these rules); and

11.02(1)(b)(iii) pedagogical instruction in high-quality practices for face-to-face, online and blended learning.

11.02(1)(c) Include coursework that:

11.02(1)(c)(i) provides content knowledge specific to teaching the aligned preschool through elementary and secondary education standards, pursuant to 22-7-1005, C.R.S.;

11.02(1)(c)(ii) is aligned with the Colorado READ Act (as established in 22-7-12, C.R.S.) and the foundational reading skills of phonemic awareness, phonics, vocabulary development, reading fluency, including oral skills and reading comprehension, and the skills and strategies necessary to ensure that every student learns how to read;

11.02(1)(c)(ii)(A) Reading coursework and clinical practice opportunities must be a significant focus for teachers preparing for endorsement in early childhood, elementary or special education.

11.02(1)(c)(iii) provides educator candidates with an overview of Title II of the federal "Americans With Disabilities Act of 1990," section 504 of the federal "Rehabilitation Act of 1973," the federal "Individuals With Disabilities Education Act," individualized education programs (as defined in 22-20-103(15), C.R.S.) and child find, and that teaches educators effective special education classroom practices, including, but not limited to, inclusive learning environments; and

11.02(1)(c)(iv) integrates theory and practice and educates candidates in the methodologies, practices and procedures of teaching standards-based education, and specifically the quality standards specified in 5.00 and 6.00 of these rules.

11.02(1)(d) Include intentional clinical experiences, early on and through the program, relating to predetermined state content standards that afford candidates multiple, intentional experiences to learn from practice.

11.02(1)(d)(i) Clinical experiences must be aligned with educator preparation program curricula so that candidates develop pedagogical skills and pedagogical content knowledge; and

11.02(1)(d)(i)(A) Include a minimum of 800 hours for teacher candidates;

11.02(1)(d)(i)(B) Include a minimum of 300 hours for principal and administrator candidates; and

11.02(1)(d)(i)(C) A majority of the clinical experience hours must be completed through a continuous clinical placement,

11.02(1)(d)(i)(D) For every additional endorsement or advanced degree, a candidate shall complete an appropriate amount of supervised clinical experiences related to predetermined state content standards, including best practices and relevant national norms related to the candidate's endorsement(s).

11.02(1)(d)(ii) To maximize candidates' clinical experiences, educator preparation programs must establish a formal mentor/cooperating educator selection and training process that:

11.2(1)(d)(ii)(A) selects mentors or cooperating educators based on a defined set of criteria, which must include but need not be limited to: evidence of exemplary teaching and/or school leadership; the ability to model and counsel the candidate; relevant mentorship coursework; and a valid teacher license and endorsement in the candidate's content area if available (a mentor teacher endorsement is not required);

11.02(1)(d)(ii)(B) includes a training program for mentors that provides direction with regard to structured guidance, the provision of regular ongoing support to new educators and educator performance evaluation;

11.02(1)(d)(ii)(C) identifies the duties of the mentor or cooperating educator including, as applicable: serving as a member of the support team; providing ongoing observation, counseling and supervision; and representing the support team for purposes of making recommendations about the licensing for the individual;

11.02(1)(d)(ii)(D) provides a checklist of the duties of the mentor and the time required; and

11.02(1)(d)(ii)(E) defines provisions made by the educator preparation program to assist the mentor teacher in properly discharging their regular duties, such as:

11.02(1)(d)(ii)(E)(I) providing a substitute teacher so the mentor teacher may have release time to coach and support the mentee, as necessary and appropriate; and

11.02(1)(d)(ii)(E)(II) allowing for adequate compensatory time and/or other compensation for the mentor teacher's required planning and observation schedule and ongoing regular conferences with the alternative teacher.

11.02(1)(e) Require each teacher preparation candidate in an initial licensure program to complete at least one semester- or quarter-length course in behavioral health training and one semester- or quarter-length course in using culturally responsive and trauma- and evidence-informed practices;

11.02(1)(f) Require candidates for an elementary, middle school mathematics or secondary mathematics endorsement training in evidence-informed practices in mathematics, including interventions to help students who are below grade level or struggling in mathematics, students with disabilities and students who are English language learners;

11.02(1)(g) Require each educator preparation candidate, prior to graduation, to demonstrate the skills required for licensure;

11.02(1)(h) Engage in continuous evidence-based review cycles regarding the program's impact on candidate's development through the program, by implementing procedures for:

11.02(1)(h)(i) collecting and reviewing evaluative data concerning the preparation program and for modifying the program as necessary in response to the data collected;

11.02(1)(h)(ii) reviewing the scores achieved on professional competency demonstrations by teacher candidates enrolled in and graduating from/completing the program, and modifying the program as necessary to improve those scores; and

11.02(1)(h)(iii) engaging stakeholder feedback for program continuous improvement, including at a minimum:

11.02(1)(h)(iii)(A) processes to evaluate strengths, challenges, and improvement foci;

11.02(1)(h)(iii)(B) processes for gathering stakeholder feedback and other impact evidence from candidates, faculty, staff, partners, and others; and

11.02(1)(h)(iii)(C) for alternative programs only, establishing an advisory council, which must include, at a minimum, representatives from participating school districts, charter schools, nonpublic schools, the institute or BOCES; at least one qualified mentor teacher; and a representative from any accepted institution of higher education cooperating with the designated agency, if applicable.

11.02(1)(h)(iii)(C)(I) Representatives on the advisory council must reflect the geographic make-up of the educator preparation program if the program is composed of more than one entity; and

11.02(1)(h)(iii)(C)(II) Advisory council's duties must include but need not be limited to: providing the educator preparation program with information regarding the organization and management and operation of the approved alternative teacher program.

11.02(2) In addition to the requirements outlined in 11.02(1), traditional educator preparation programs at an approved institution of higher education must:

11.02(2)(a) Be designed to be completed within four academic years;

11.02(2)(b) Have a comprehensive admission system that includes screening of and counseling for students who are considering becoming teacher candidates; and

11.02(2)(c) Have practicing educators or faculty members regularly screen and counsel candidates.

11.02(3) In addition to the requirements outlined in 11.02(1), alternative teacher preparation programs at an approved Designated Agency must:

11.02(3)(a) be a one-year or two-year teacher preparation program for persons of demonstrated knowledge and ability who hold an alternative teacher license or interim authorization pursuant to section 22-60.5-111(7), C.R.S.;

11.02(3)(a)(i) one-year programs shall be designed to be completed in one year. The program may be extended for one additional year based on documentation of unforeseen circumstances, as demonstrated by the applicant and the designated agency and approved by the Department;

11.02(3)(a)(ii) two-year programs shall be designed to be completed in two years; and

11.02(3)(a)(iii) provide for a person being alternatively prepared as a special education generalist to be employed as an alternative teacher for a maximum of three years;

11.02(3)(b) Ensure that alternative teachers:

11.02(3)(b)(i) are employed by or have a clinical agreement in place with a school district, a licensed nonpublic childcare or other preschool facility, charter school, the Charter School Institute, nonpublic school or BOCES to teach;

11.02(3)(b)(ii) demonstrate competency in their subject area endorsement and/or assignment pursuant to section 3.00 of these rules including:

11.02(3)(b)(ii)(A) If the alternative teacher is asked to teach in any content area(s) outside of their assessed content area, the school or school district is required to keep on file documented evidence that the alternatively licensed teacher has completed 24 semester hours of applicable coursework with a minimum average grade of B- in the

additional content area(s) or the equivalent thereof, or has passed the related approved content area test(s); and

11.02(3)(b)(iii) include a minimum of 225 clock-hours of planned instruction, including, but not limited to, teacher preparation courses that meet the quality standards and English Language Learner Quality Standards, training in dropout prevention, and prepare candidates to meet the additional endorsement standards for the endorsement area sought.

11.02(3)(b)(iii)(A) Varied program length and design are allowable for programs to address differentiated clock-hours needed for alternative teacher candidates based on their endorsement area standards.

11.02(3)(c) Evaluate alternative teachers' progress in accordance with section 22-9-106, C.R.S.;

11.02(3)(c)(i) Mentor teachers may assess alternative teachers if trained in accordance with 22-9-106(4), C.R.S., except that mentor teachers are not required to hold a principal or administrator license.

11.02(3)(c)(ii) If a mentor teacher is not available, the designated agency may submit a plan for mentor support that provides that same level of mentorship to the alternative teacher.

11.02(3)(d) Include an alternative teacher support team consisting of, at a minimum, the alternative teacher's mentor, the building principal and a representative of the approved designated agency;

11.02(3)(e) Identify the duties of the alternative teacher support team including:

11.02(3)(e)(i) evaluating the related prior education and experience of the alternative teacher to determine the appropriate program elements which will prepare the candidate for full licensure;

11.02(3)(e)(ii) providing the alternative teacher with an orientation to the school, its student population, the policies and procedures which affect teaching, classroom management strategies and the teacher's responsibilities.

11.02(3)(e)(iii) ensuring the majority of the alternative teacher's assignment will be in the content area in which the alternative teacher has been approved by the department under section 3.12(1)(c);

11.02(3)(e)(iv) the method of evaluation and inventory tracking for each alternative teacher's proficiencies using performance evaluations, as based on the quality standards and as prescribed by section 5.00 of these rules; and

11.02(3)(e)(v) the schedule of mentor and principal observations, as well as a minimum of four alternative teacher observations by program leaders.

11.02(4) School districts, BOCES, accepted institutions of higher education, non-profit organizations, nonpublic schools, charter schools, the institute or any combination thereof may apply to the State Board of Education for approval as an alternative teacher preparation program under section 22-60.5-205, C.R.S.

11.03 Authorization of New Educator Preparation Programs and Alternative Preparation Programs

11.03(1) Proposals submitted to the Department by entities for authorization by the State Board of Education as approved educator preparation programs and alternative preparation programs must include, but not be limited to:

11.03(1)(a) Demonstrated evidence of a need for the proposed program;

11.03(1)(b) Detailed plan to address standards outlined in section 11.02 of these rules.

11.03(2) When an entity is approved for a new educator preparation program, including alternative preparation programs, the Department may review the new educator preparation program no sooner than 12 months but no more than 24 months after the new preparation program is initially approved. The program may be approved for up to five years.

11.03(3) When an approved entity offers a new educator preparation program or significantly modifies an existing program, the entity shall submit the new or modified program to the Department for review.

11.03(4) Each approved educator preparation program, including approved programs and alternative programs, must complete required data submissions for enrollee and program completers as well as additional data as requested by the Department.

11.04 Reauthorization of Approved Programs of Educator Preparation and Alternative Programs

11.04(1) An evaluation for the reauthorization of approved programs of educator preparation and alternative programs will occur no more frequently than once every five years if they have obtained full approval at the program's last reauthorization review.

11.04(2) As part of the reauthorization process, programs:

11.04(2)(a) are responsible for providing evidence and documentation as requested by the Department, including but not limited to program design and implementation to meet standards in section 12.01 of these rules; and

11.04(2)(b) will facilitate, in collaboration with the Department, the onsite evaluation and corresponding logistics of a state review team site visit.

11.04(2)(b)(i) State review team members may include Department staff, educator preparation program leaders from other institutions, content experts, and educator leaders from Colorado schools.

11.04(2)(b)(ii) Programs are responsible for the costs associated with their reauthorization site visit to include such items as transportation, lodging, parking, and meals for the state review team.

11.04(3) Based on recommendations from the Department, the State Board of Education will determine whether a program will be approved, conditionally approved, placed on probation or terminated.

11.04(3)(a) Approval status can be for all content areas offered by a program or for individual areas the program has been authorized to provide for educator preparation.

11.04(3)(b) Programs placed on conditional approval or probation will receive identified areas for improvement that must be fully met through additional reviews and site visits prior to reconsideration by the State Board of Education.

11.04(3)(c) Programs placed on conditional approval may continue to enroll candidates but programs receiving probationary status are not able to enroll new candidates until such time that their status moves to conditional or approved.

11.04(3)(d) Programs placed on probationary status have no more than a year to address areas for improvement and either receive full or conditional approval.

11.04(3)(d)(i) If programs on probation cannot improve their approval status within the identified timeline, they will be terminated.

12.00 Reserved

13.00 Individualized Alternative Principal Programs and Alternative Principal Programs

The following will serve as standards for the initial and continuing approval of individualized alternative principal programs and alternative principal programs.

13.01 In designing an individualized alternative principal program, the school district, charter school or nonpublic school shall, at a minimum, submit to the State Board:

13.01(1) documentation of the coursework, practicum and other educational requirements identified by the school district, charter school or nonpublic school that will comprise the individualized alternative principal program plan and that will be completed while the applicant is employed under the principal authorization; and

13.01(2) a letter from the district, charter school or nonpublic school stating its intention to employ the applicant as a principal or assistant principal upon issuance of the principal authorization;

13.01(3) At a minimum, an individualized alternative principal program must ensure that:

13.01(3)(a) the applicant will attain the information, experience, training and skills comparable to those possessed by a person who qualifies for an initial principal license as provided in section 22-60.5-301(1)(a), C.R.S.;

13.01(3)(b) upon completion, the candidate will be able to provide documented evidence of having met or surpassed the Principal Quality Standards cited in section 6.00 of these rules;

13.01(3)(c) the candidate will receive coaching and mentoring from one or more licensed principals and administrators, as well as continuing performance-based assessment of the candidate's skills development;

13.01(3)(d) except that, if the candidate participates in a nonpublic school's individualized alternative principal program approved by the State Board of Education, the candidate must receive coaching and mentoring from one or more principals and administrators who have three or more years of experience in a nonpublic school;

13.01(3)(e) the candidate demonstrates professional competencies using the assessment of quality standard measures in subject matter areas as specified by rule of the State Board pursuant to section 22-60.5-303, C.R.S.; and

13.01(3)(f) the candidate receives information and training on special education laws and regulations, as outlined in section 22-60.5-111(14)(c)(IV), C.R.S.

13.02 A school district or districts, BOCES, accepted institution of higher education, nonprofit organization, charter school, the institute, nonpublic school or any combination thereof may apply to the State Board for approval as a designated agency of alternative principal programs under section 22-60.5-305.5, C.R.S.

13.02(1) In designing an alternative principal program, the designated agency must, at a minimum, demonstrate that:

13.02(1)(a) the applicant will attain the information, experience, training and skills comparable to those possessed by a person who qualifies for an initial principal license as provided in section 22-60.5-301(1)(a), C.R.S.;

13.02(1)(b) the program content meets or exceeds the Principal Quality Standards cited in section 6.00 of these rules;

13.02(1)(c) training of alternative principals will include a minimum of 225 clock-hours of planned instruction, and activities must include, but not be limited to, principal preparation courses that meet the Principal Quality Standards and English Language Learner Quality Standards.

13.02(1)(d) the candidate will receive coaching and mentoring from one or more licensed principals and administrators, as well as continuing performance-based assessment of the candidate's skills development;

13.02(1)(e) the candidate will be required to demonstrate professional competencies using the assessment of quality standard measures in subject matter areas as specified by rule of the State Board pursuant to section 22-60.5-303, C.R.S.;

13.02(1)(f) the candidate will receive information and training on special education laws and regulations, as outlined in section 22-60.5-111(14)(c)(IV), C.R.S.; and

13.02(1)(g) the alternative principal program will be designed to be completed in three years or less.

13.02(1)(g)(i) School districts may only employ a person under a principal authorization for three years, after which time, the person must obtain an initial or professional license in order to continue working as a principal.

13.02(2) Proposals submitted by entities for authorization as designated agencies of alternative principal programs must include, but not be limited to:

13.02(2)(a) demonstrated evidence of a need for the proposed program;

13.02(2)(b) evidence of the establishment of an advisory council by the designated agency;

13.02(2)(c) a listing of the advisory council's duties, which must include but need not be limited to: providing the designated agency with information regarding the organization, management and operation of the approved alternative principal program;

13.02(2)(d) criteria for the selection of mentor principals which must include but need not be limited to: evidence of exemplary school leadership; the ability to model and counsel the alternative principal; relevant coursework; and a valid license and endorsement as a professional principal.

13.03 When a new designated agency is approved to offer a new alternative principal program, the department may review the new program no sooner than twelve months but not more than twenty-four

months after the new program is initially approved. The designated agency that operates an alternative principal program will be reauthorized not more than once every five years.

14.00 Colorado Teacher of the Year Program

14.01 Administration

14.01(1) The Colorado Teacher of the Year is selected in accordance with the National Teacher of the Year selection criteria as articulated by the Council of Chief State School Officers.

14.01(2) The Department may reward the educator with gifts, services and opportunities that may include:

14.01(2)(a) a sabbatical from teaching responsibilities that includes moneys awarded to the recipient's employer for the purpose of hiring a substitute teacher during the award recipient's sabbatical;

14.01(2)(b) a cash gift;

14.01(2)(c) travel and lodging expenses;

14.01(2)(d) a computer;

14.01(2)(e) supplies and equipment for the award recipient's classroom or school; and

14.01(2)(f) the opportunity to receive additional training or education.

14.01(3) During tenure as Colorado Teacher of the Year, the award recipient may participate in activities such as:

14.01(3)(a) attending local, regional and national events related to the award recipient's designation as Colorado Teacher of the Year;

14.01(3)(b) promoting the teaching profession;

14.01(3)(c) teaching best practices to other teachers;

14.01(3)(d) teaching temporarily in other public schools or school districts;

14.01(3)(e) mentoring students in teacher preparation programs and supporting newer teachers in Colorado;

14.01(3)(f) collaborating with institutions of higher education in scholarly research and teaching; and

14.01(3)(g) participating in special projects relating to education that are important to the award recipient.

15.00 Inactive Status of Licenses

15.01 Holders of professional licenses may choose to place their licenses in inactive status by notifying the Department, via an online application, of their intent to place a professional license on inactive status.

15.02 While on inactive status, the expiration date of a professional license is suspended and the individual is deemed as not holding the credential.

15.03 A person may return a professional license to active status at any time upon application.

15.03(a) Upon application to return to active status, the Department must reissue the professional license with a new expiration date reflecting the period remaining on the professional license as of the date the license-holder placed the license in inactive status.

15.03(b) The Department may, upon request of a license-holder, and with evidence of the license-holder's active military service, reissue the license with a new expiration date reflecting the amount of time which remained on the license prior to the license-holder's active military service, plus the amount of time during which the license-holder served in active military service.

15.04 Renewal of licenses previously inactive:

15.04(a) Any person who placed a license on inactive status may, but is not required, to complete professional development activities which meet the requirements of section 7.02 of these rules. Such activities completed while on inactive status must apply to renewal of the person's professional license after the person returns to active status.

15.04(b) At the time of renewal, the license-holder must provide to the Department evidence of completion of the professional development activities which meet the requirements for license renewal as provided in section 7.02 of these rules and which were completed within the seven years preceding the date on which the professional license will expire after its return to active status.

16.00 Waivers

16.01 A written request for a waiver must be received by the State Board of Education at least 120 days prior to proposed implementation. The State Board is authorized to waive any requirement regarding alternative teacher programs or approved induction programs. Waiver applications must include:

16.01(1) the specific portion of these rules to be waived;

16.01(2) the rationale for the request;

16.01(3) detailed information on the innovative programs or plans to be instituted;

16.01(4) financial impact of the proposed waiver, if applicable;

16.01(5) reasons why these innovative programs or plans cannot be implemented under the applicable rule; and

16.01(6) a detailed plan for the evaluation of the innovative programs or plans to show their effectiveness in improving the quality of the affected educators.

Editor's Notes

History

Rules 2260.5-R-1.00, 15.00, 15.05 emer. rules eff. 08/14/2008.

Rules 2260.5-R-1.00, 15.00, 15.05 eff. 10/31/2008.

Rules 2260.5-R-1.16, 4.04 eff. 10/30/2009.

Rules 2260.5-R-1.00-2.04, 3.01, 3.03, 3.12, 4.03, 4.12, 4.17, 7.02, 13.00, 18.00-19.00 eff. 07/30/2010.

Rules 2260.5-R-1.19, 4.11, 4.14(11)(d-e) emer. rules eff. 09/16/2010.

Rules 2260.5-R-1.17, 4.11, 6.13, 10.05 eff. 12/31/2010.

Rules 2260.5-R-1.20, 8.22-8.23 eff. 01/31/2011.

Rules 2260.5-R-1.21, 4.16, 15.00-15.00(5) eff. 09/30/2012.

Rules 2260.5-R-2.01, 2.03, 3.01, 3.03, 3.05-3.07, 3.12, 4.02-4.04, 4.11, 4.13, 4.17, 8.02, 8.04, 8.14, 12.02,

15.03, 18.00, 23.01 eff. 01/30/2013.

Rules 2260.5-R-1.23, 3.01(2)(e)(ii)(3), 3.06(1), 3.12(3)(b)(i), 4.13(3), 4.13(5), 4.17 eff. 05/15/2014.

Rule 2260.5-R-8.20 eff. 07/30/2014.

Rule 2260.5-R-4.18 eff. 08/14/2014.

Entire rule eff. 03/30/2016.

Rules 2260.5-R-1.24, 2.01(26), 3.02(1), 3.05-3.07, 4.02(1), 4.09, 4.12-4.14, 4.17, 4.18, 7.02(1), 8.14, 9.01, 9.05-9.07, 10.02, 10.04-10.06, 11.09, 12.00, 12.02, 13.00, 13.01, 15.00, 15.01 eff. 06/14/2017.

Rules 2260.5-R-1.25, 2.01, 12.02(1), 13.00, 15.00, 18.00, 18.01 eff. 01/30/2018.

Entire rule eff. 08/14/2018.

Entire rule eff. 05/30/2019.

Entire rule eff. 07/30/2020.

Entire rule eff. 04/30/2021.

Entire rule eff. 12/30/2021.

Entire rule eff: 11/30/2022

Entire rule eff: TBD upon approval

Annotations

Introductory paragraph of Rule 2260.5-R-23.00 (adopted 11/10/2005) was not extended by House Bill 07-1167 and therefore expired 05/15/2007.

Rules 2260.5-R-3.03(2)(a), 3.06(1)(a), 3.06(1)(c), 3.07(1)(d), 4.13(4)(c), 4.17(7), 15.00(2)(d), 15.00(2)(j) (adopted 12/14/2006) were not extended by Senate Bill 08-075 and therefore expired 05/15/2008.

Rules 2260.5-R-3.07(1), 4.17(1), 4.17(2), 4.17(3) were repealed by Senate Bill 08-075, eff. 05/15/2008.

Rules 4.11(6)-4.11(6)(d) (adopted 08/08/2012) were not extended by Senate Bill 13-079 and therefore expired 05/15/2013.

Rule 4.04 (adopted 12/05/2012) was not extended by Senate Bill 15-100 and therefore expired 05/15/2015.

Notice of Proposed Rulemaking

Tracking number

2024-00021

Department

300 - Department of Education

Agency

301 - Colorado State Board of Education

CCR number

1 CCR 301-101

Rule title

RULES FOR THE ADMINISTRATION OF EDUCATOR LICENSE ENDORSEMENTS

Rulemaking Hearing

Date

03/13/2024

Time

09:00 AM

Location

201 E. Colfax, Denver

Subjects and issues involved

Inclusion of evidence-informed practices in math standards in early childhood, elementary and middle school and secondary math endorsement standards
Combined special education preparation and endorsement standards

Special education core, generalist and specialist standards now reflected in one set of special education generalist standards; Eliminates the overlap of standards in core and generalist groupings; Specialist standards were not found to be significantly different than generalist and insufficient for an entirely separate and elevated endorsement

Combined early childhood special education preparation and endorsement standards

Early childhood special education and specialist standards now reflected in one set of early childhood special education standards; Eliminates the overlap found in the early childhood special education and early childhood special education specialist standards; Specialist standards were not found to be significantly different than early childhood special education standards and insufficient for an entirely separate and elevated endorsement

Updates to all nine special services endorsement standards to streamline the application/licensure process for candidates

Statutory authority

The statutory basis for these rules is found in §§ 22-60.5-106 and 22-60.5-115, C.R.S. These rules establish the standards and criteria for the issuance of endorsements to licenses in subject areas or other areas of educational specialization for teachers, special services providers, principals and administrators.

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DEPARTMENT OF EDUCATION

Colorado State Board of Education

RULES FOR THE ADMINISTRATION OF EDUCATOR LICENSE ENDORSEMENTS

1 CCR 301-101

[Editor's Notes follow the text of the rules at the end of this CCR Document.]

1.00 Statement of Basis and Purpose

The statutory basis for these rules is found in §§ 22-60.5-106 and 22-60.5-115, C.R.S. These rules establish the standards and criteria for the issuance of endorsements to licenses in subject areas or other areas of educational specialization for teachers, special services providers, principals and administrators.

2.00 General Licensing Regulations

The Colorado Department of Education has the sole authority to issue educator licenses and authorizations. Pursuant to 22-63-201 and 22-32-126, C.R.S., a Colorado license or authorization is required for employment as a teacher, special services provider or principal in a Colorado school or school district. All licenses and authorizations must be endorsed to indicate the grade levels/developmental levels and specialization area(s) which are appropriate to the applicant's preparation, training and experience.

2.01 Definitions

- 2.01(1) Accepted institution of higher education: An institution of higher education that offers at least the standard bachelor's degree and is recognized by one of the following regional associations: Western Association of Schools and Colleges; Northwest Association of Schools, Colleges and Universities; North Central Association of Colleges and Schools; New England Association of Schools and Colleges; Southern Association of Colleges and Schools; or Middle States Association of Colleges and Schools.
- 2.01(2) Administrator: Any person who may or may not be licensed, but who administers, directs or supervises an education instructional or education-related program, or a portion thereof, in any school or school district, or nonpublic school in the state and who is not the chief executive officer or an assistant chief executive officer of such school.
- 2.01(3) Approved induction program: A program of continuing professional development for initial license-holders that meets the requirements of the Colorado State Board of Education, and that upon completion leads to a recommendation for a professional license by the school district or districts, charter school, nonpublic school, or the institute providing such induction program.
- 2.01(4) Approved program of preparation: A program of study for the preparation of educators ~~that meets the content requirements of the approved by the~~ Colorado State Board of Education ~~pursuant to § 22-60.5-121, C.R.S. and for public and private institutions, is approved by Colorado Commission on Higher Education~~ and that, upon completion, leads to a recommendation for licensure by an accepted institution of higher education.
- 2.01(5) Board of education: The governing body authorized by law to administer the affairs of any school district in the state except junior and community college districts. "Board of education" also includes a board of cooperative services organized pursuant to 22-5-101, C.R.S.

Style Definition: Title1

Commented [KT1]: Per 22-60.5-121, C.R.S.

- 2.01(6) Charter school: A charter school authorized by a school district pursuant to Part 1 of Article 30.5 of Title 22 or a charter school authorized by the state charter school institute pursuant to Part 5 of Article 30.5 of Title 22.
- 2.01(7) Colorado Academic Standards: The state academic standards that identify the knowledge and skills that a student should acquire as the student progresses from preschool through elementary and secondary education, as adopted by the State Board of Education pursuant to section 22-7-1005, C.R.S. The Colorado Academic Standards ~~herein incorporated by reference in these rules were adopted by the State Board of Education in December 2010 and are available at www.cde.state.co.us. Later amendments to the Colorado Academic Standards are not incorporated. The Colorado Department of Education maintains a copy of the standards readily available for public inspection at 201 East Colfax Avenue, Denver, Colorado, during regular business hours.~~
- 2.01(8) Department of education or Department: The Colorado State Department of Education as defined in 24-1-115, C.R.S.
- 2.01(9) Diversity: The backgrounds of all students and school personnel.
- 2.01(10) Endorsement: The designation on a license or an authorization of grade level(s) or developmental level(s), subject matter or service specialization in accordance with the preparation, training and experience of the holder of such license or authorization. Endorsements typically reflect major areas of specialization.
- 2.01(11) Endorsement/specialty area: The sequence of courses and experiences in the academic or professional area that the education student plans to teach, for the grade level(s) or developmental level(s) at which the student plans to teach, and/or for the services that the student plans to provide. Examples of specialty areas include science (grades 7-12), elementary education (grades K-6), school counselor (ages birth-21), reading specialist (grades K-12) and physical education (grades K-12).
- 2.01(12) Institute: The state charter school institute created pursuant to section 22-30.5-503, C.R.S.
- 2.01(13) Knowledge base: The assumptions, theories and research findings which provide the foundations that support the model(s) on which the program is founded, articulated, implemented and evaluated.
- 2.01(14) Licensure: The official recognition by a state governmental agency that an individual has met state-mandated minimum requirements and is approved to practice as a duly certified/licensed educator in the state.
- 2.01(15) Mentor administrator: Any administrator who is designated by a school district or districts, charter school, nonpublic school, or the institute providing an approved induction program for initial administrator licensees, who has demonstrated outstanding administrative skills and school leadership and who can provide exemplary modeling and counseling to initial administrator license-holders participating in an approved induction program.
- 2.01(16) Mentor principal: Any principal who is designated by a school district or districts, charter school, nonpublic school, or the institute providing an approved induction program for initial principal license-holders, who has demonstrated outstanding principal skills and school leadership and who can provide exemplary modeling and counseling to initial principal license-holders participating in an approved induction program.
- 2.01(17) Mentor special services provider: any special services provider who is designated by a school district or districts, charter school, nonpublic school, or the institute providing an approved

induction program for initial special services license-holders, who has demonstrated outstanding special services provider skills and school leadership and who can provide exemplary modeling and counseling to initial special services license-holders participating in an approved induction program.

2.01(18) Mentor teacher:

2.01(18)(a) A teacher designated by a school district, charter school, or nonpublic school, employing an alternative teacher, who has demonstrated outstanding teaching and school leadership and who can provide exemplary modeling and counseling to alternative teachers participating in an alternative teacher program; or

2.01(18)(b) Any teacher who is designated by a school district or districts, charter school, nonpublic school, or the institute providing an approved induction program for initial teacher license-holders, who has demonstrated outstanding teaching and school leadership and who can provide exemplary modeling and counseling to initial teacher license-holders participating in an approved induction program.

2.01(18)(c) A teacher does not need to hold a mentor teacher endorsement as described in Rule 4.24 in order to be designated by a school district or districts, charter school, nonpublic school or the institute as described in Rule 2.01(18)(a) and 2.01(18)(b).

2.01(19) Nonpublic School: Any independent or parochial school that provides a basic academic education. Neither the State Board of Education nor any local school board of education has jurisdiction over the internal affairs of any independent or parochial school in Colorado.

2.01 (20) Practicum: An intensive experience in which education students practice and demonstrate professional skills and knowledge. Student teaching and internships are examples of a practicum.

2.01(21) Principal: Any person who is employed as the chief executive officer or an assistant chief executive officer of any school in the state and who administers, directs or supervises the education instruction program in such school or nonpublic school.

2.01(22) Professional education unit: The college, university, school, department or other administrative body within the institution of higher education that is primarily responsible for the preparation of teachers and other professional education personnel.

2.01(23) School: Any of the public schools of the state.

2.01(24) School district: Any school district organized and existing pursuant to law, but does not include junior or community college districts. "School district" includes a board of cooperative services organized pursuant to 22-5-101, C.R.S.

2.01(25) Special services provider: Any person other than a teacher, principal or administrator who is employed by any school district, charter school, nonpublic school, or the institute to provide professional services to students in direct support of the education instructional program.

2.01(26) State Board of Education: The State Board of Education established by Section 1 of Article IX of the Constitution of the State of Colorado.

2.01(27) Student teaching: Part of the 800 hours of field experience required in a teacher preparation program, it is an in-depth, direct teaching experience conducted in a school and classroom setting. It is considered a culminating field-based experience for the basic teacher preparation program where candidates practice and demonstrate professional skills and knowledge.

2.01(28) Teacher: Any person employed to instruct students in any school or nonpublic school in the state.

3.00 Endorsement of Licenses or Authorization.

Licenses and authorizations must be endorsed to indicate the grade levels/developmental levels and specialization area(s) which are appropriate to the applicant's preparation, training and experience.

3.01 Initial Endorsements.

3.01(1) Initial endorsements must be based upon:

3.01(1)(a) recommendation by a Colorado accepted institution of higher education verifying the satisfactory completion of an approved program for the endorsement; or

3.01(1)(b) recommendation by an accepted out-of-state institution of higher education and compliance with rule 2.03(3) of 1 CCR 301-37 or

3.01(1)(c) evaluation of licenses issued upon foreign degree programs for comparability to Colorado's standards; and

3.01(1)(d) fulfilling the requirements outlined below:

3.01(1)(d)(i) for an elementary education endorsement (grades K-6), passage of a Colorado State Board of Education-approved elementary education content test.

3.01(1)(d)(ii) for a special education generalist endorsement (ages 5 -21):

3.01(1)(d)(ii)(A) verification of 24 semester hours of specific coursework completed at an accepted institution of higher education or the equivalent as determined by the Department of Education through a transcript or portfolio review. The portfolio may include, but is not limited to, verification of teaching experience in the requested endorsement area, experiences outside of schools, in-service or continuing education, standardized assessments and recommendations from experts in the endorsement/specialty area to be taught. Such academic credit and portfolio experiences must be consistent with the content preparation requirements in the appropriate endorsement area found in section 4.00 of these rules; and

3.01(1)(d)(ii)(B) passage of the Colorado State Board of Education-approved special education generalist assessment and passage of a Colorado State Board of Education-approved elementary exam.

3.01(1)(d)(iii) for secondary (grades 7-12) and all K-12 and endorsement areas for ages birth-8:

3.01(1)(d)(iii)(A) a degree in the endorsement area; or

3.01(1)(d)(iii)(B) verification of 24 semester hours of specific coursework completed at an accepted institution of higher education or the equivalent as determined by the Department of Education through a transcript or portfolio review. The portfolio may include, but is not limited to, verification of teaching experience in the requested endorsement area, experiences outside of schools, in-service or continuing education,

standardized assessments, and recommendations from experts in the endorsement/specialty area to be taught. Such academic credit and portfolio experiences must be consistent with the content preparation requirements in the appropriate endorsement area found in section 4.00 of these rules; or

- 3.01(1)(d)(iii)(C) passage of the Colorado State Board of Education-approved assessment of content area knowledge relevant to the area of endorsement.

3.02 Additional Endorsements

Second or subsequent endorsements may be awarded by the Department based upon one of the following:

- 3.02(1) the completion of an approved program of preparation at an accepted institution of higher education, which includes completion of field experiences, student teaching or practicum or internship, unless waived by the approved institution pursuant to the following:
- 3.02(1)(a) a waiver of field experience, student teaching, practicum or internship may be granted upon verification of satisfactory experience in the area of endorsement being sought. Waivers of coursework or other program requirements may also be granted for work experience, including teaching or administrative experience in schools.
 - 3.02(1)(b) institutions of higher education must have written criteria, procedures and due-process procedures for the recognition of competencies acquired through experience. Such criteria and due-process procedures must include a process for appealing the denial of a request for waiver of field experience, student teaching, practicum, internship or other coursework or program requirements.
 - 3.02(1)(c) applicants who complete approved programs for additional endorsements must provide evidence of successful completion of the Colorado State Board of Education–approved assessment of content area knowledge in the endorsement area being sought where required.
- 3.02(2) academic preparation, experience or assessment for endorsements in section 4.00 of these rules:
- 3.02(2)(a) for elementary education endorsement (grades K-6):
 - 3.02(2)(a)(i) passage of a Colorado State Board of Education-approved elementary content test.
 - 3.02(2)(b) for a special education generalist endorsement (ages 5-21):
 - 3.02(2)(b)(i) verification of 24 semester hours of specific coursework completed at an accepted institution of higher education or the equivalent as determined by the Department of Education through a transcript or portfolio review. The portfolio may include, but is not limited to, verification of teaching experience in the requested endorsement area, experiences outside of schools, in-service or continuing education, standardized assessments, and recommendations from experts in the endorsement/specialty area to be taught. Such academic credit and portfolio experiences must be consistent with the content preparation requirements in the appropriate endorsement area found in section 4.00 of these rules; and

3.02(2)(b)(ii) passage of the Colorado State Board of Education-approved special education generalist assessment and passage of a Colorado State Board of Education-approved elementary education exam.

3.02(2)(c) for secondary (grades 7-12) and all K-12 and endorsements areas for ages birth-8:

3.02(2)(c)(i) a degree in the endorsement area; or

3.02(2)(c)(ii) verification of 24 semester hours of specific coursework completed at an accepted institution of higher education or the equivalent as determined by the Department of Education through a transcript or portfolio review. The portfolio may include but is not limited to verification of teaching experience in the requested endorsement area, experiences outside of schools, in-service or continuing education, standardized assessments, and recommendations from experts in the endorsement/specialty area to be taught. Such academic credit and portfolio experiences must be consistent with the content preparation requirements in the appropriate endorsement area found in section 4.00 of these rules; or

3.02(2)(c)(iii) passage of the Colorado State Board of Education-approved assessment of content area knowledge relevant to the area of endorsement.

3.03 Development and Approval of New Endorsement Areas and Discontinuance of Endorsement Areas

3.03(1) The Colorado State Board of Education may establish by rule and regulation appropriate endorsements and the criteria for such endorsements.

3.03(2) The Department must utilize appropriate content area representatives from among the education community and interested stakeholders to develop recommendations for consideration by the State Board of Education with regard to the adoption of new endorsement areas or the discontinuance of endorsement areas that are no longer relevant or applicable to student needs.

3.03(3) In the event that the State Board of Education discontinues an endorsement that was previously offered, students who at the time of discontinuance are actively enrolled in a program for the discontinued endorsement must have five years from the date that the endorsement is discontinued to complete their program and apply to the Colorado Department of Education for the endorsement.

3.03(4) Applicants will have a maximum of five years from the date of a discontinued content assessment to use the successful content assessment scores for fulfillment of an endorsement criteria.

3.04 Review of License and Endorsement Standards

3.04(1) Pursuant to section 22-2-109(1)(g)-(i), C.R.S., the standards of qualification, preparation and experience required for the issuance of licenses and which prescribe standards for endorsements appropriate for licenses must be reviewed periodically for currency.

3.04(1)(a) The Colorado State Board of Education must establish a schedule for review of licensing/endorsement standards.

3.04(1)(b) The Colorado Department of Education must utilize representatives from all levels of education when reviewing and developing licensing endorsement standards.

4.00 Teaching Endorsements

The following shall serve as standards for endorsements on initial and professional teacher licenses:

4.01 Early Childhood Education (Ages Birth-8)

To be endorsed in early childhood education (ECE), an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program including prescribed field experience and student teaching requirements; have completed an approved program in early childhood education; have demonstrated competency in research-based literacy instruction as outlined in rule 4.02(5) – 4.02(13) and [evidence-informed practices in mathematics as outlined in rule 4.02\(14\) – 4.02\(16\)](#); and have demonstrated the competencies specified below:

Commented [TK2]: Per 22-60.5-121(2)(h), C.R.S.

4.01(1) Child growth and development: Understanding a child's growth, development and learning is paramount in providing experiences that foster each child's predictable steps and sequences of development. Knowing how children typically grow, develop and learn allows early childhood educators to plan, guide and monitor learning experiences that address the integration of developmental domains for each and every child. Developmentally appropriate learning experiences consider a child's developmental abilities, temperament, language and cultural background, needs and learning styles while recognizing factors such as family characteristics and community influences. Fully understanding the importance of child growth, development and learning means all children are valued individually and inclusivity is expected and respected.

4.01(1)(a) Knowledge of developmental domains, changes and milestones: ECE professionals are expected to understand, analyze and implement strategies that reflect current child-development pedagogy, theory and research. Primarily, ECE professionals use this knowledge to plan and implement developmentally appropriate environments and experiences to meet the diverse needs of children and families. The diverse needs include but are not limited to culture, language, economic and ability. In order for ECE professionals to provide pedagogically sound experiences for children and families, they need to identify and address children's diverse developmental abilities and collaborate with community partners to assess children's strengths and challenges.

4.01(1)(b) Individual needs and differences: ECE professionals identify children's and families' risk and protective factors and accordingly plan interventions to support children's growth and development. ECE professionals use evidence-based practices to assess and address children's individual needs with respect to culturally responsive curricula and environments.

4.01(1)(c) Special needs: ECE professionals understand and apply inclusive practices for children with diverse developmental abilities. ECE professionals create inclusive environments that respect the individual abilities of children and incorporate individual goals/outcomes into daily routines and practices.

4.01(1)(d) Fostering healthy attachment and relationships: ECE professionals apply knowledge of healthy caregiver/parent/child attachments to support individual child growth, development and learning. ECE professionals understand the importance of positive relationships and their foundation in social-emotional development and learning.

4.01(2) Child observation and assessment: Child observation and assessment enables ECE professionals to use reliable and valid procedures and practices to gather information on an individual child's growth and development. Through gathering information on growth, achievement, learning styles, interests, experiences, challenges and understandings of individual children, the curriculum can be enriched to support children through the developmental stages.

Observation and assessment policies, procedures and practices should be sensitive to individual children's needs, culture, language and abilities. Policies, procedures and practices must incorporate ethical standards around confidentiality and unbiased documentation. Allocated time to share results with families and others involved with the child is a critical component to child observation and assessment.

4.01(2)(a) Principles: ECE professionals use a continuous authentic assessment process to ask questions, collect information (i.e., data), interpret the information and then make instructional decisions that are individualized and culturally responsive.

4.01(2)(b) Gathering and documenting: ECE professionals use a body of evidence from a variety of sources to systematically collect authentic assessment data. ECE professionals collaborate with specialized teams to use the assessment data to recognize and respond to children's developmental concerns through a multi-tiered system of supports.

4.01(2)(c) Summarizing and interpreting: ECE professionals link assessment data to the instructional needs of individual children, recognizing many influential factors.

4.01(2)(d) Data sharing and reporting: ECE professionals share assessment information to families and other professionals in a culturally sensitive, strength-based manner, using the families' home language.

4.01(3) Family and community partnerships: Recognizing that families are their child's first teachers and caregivers is the cornerstone of developing strong partnerships between families and early childhood educators. Children's lives are rooted in their families and communities, so valuing families in the context of their culture, language, home and community is paramount in building strong connections with children and their families. Celebrating and respecting diversity in terms of ability, language, values, customs, traditions, expectations and attitudes is essential for ECE professionals to understand in order to offer developmentally and culturally appropriate learning opportunities that will help children grow, develop and learn. Understanding that children develop in the context of different family structures and dynamics helps ECE professionals to honor the interests, needs, strengths and challenges of developing children as well. When ECE professionals work collaboratively with community organizations and agencies to meet children's needs and to encourage community involvement, children's development is enhanced. Collaborative, reciprocal family and community partnerships help to optimize a child's growth, development and learning.

4.01(3)(a) Valuing families: ECE professionals recognize, value and include families' preferences and perspectives when planning and implementing curricular decisions.

4.01(3)(b) Respect for diversity: ECE professionals implement culturally responsive practices and acknowledge diversity including cultural, language, economic, religious, family structure and ability level.

4.01(3)(c) Effective communication: ECE professionals communicate effectively with families using a variety of effective strategies that respect families' home language and individual communicative needs and preferences.

4.01(3)(d) Building reciprocal relationships with families: ECE professionals support families by building meaningful relationships with them so that families have the ability to engage in their children's development and learning experiences.

4.01(3)(e) Resources that support children and families: ECE professionals support and provide opportunities to families to engage with their children in meaningful ways. Resources are embedded within the community and reflect the diversity of the families.

- 4.01(4) Guidance: Incorporating responsive guidance strategies into an early childhood program provides opportunities for establishing secure, interpersonal peer-to-peer, adult-to-child and adult-to adult relationships. Developmentally appropriate guidance strategies help children to better understand themselves as individuals and as members of a group. A warm and caring, culturally and linguistically responsive environment in which staff consistently use a variety of evidence-based guidance strategies helps children and families feel respected, valued and accepted. Creating an inclusive and supportive culture is fostered through providing both individual and group guidance strategies.
- 4.01(4)(a) Positive interactions and relationships with individual children: ECE professionals provide responsive, caring environments for children and implement positive guidance strategies based on individualized needs and developmental characteristics.
- 4.01(4)(b) Child guidance and discipline – promoting social and emotional: ECE professionals implement evidence-based social-emotional practices that promote children's development of self-regulation that contributes to the foundation for future learning and emotional health.
- 4.01(4)(c) Communication: ECE professionals work collaboratively with families and specialists to assess and support children with challenging behaviors. Communication between families and professionals will be responsive and strength-based.
- 4.01(4)(d) Guidance and the role of staff and other adults: ECE Professionals will maintain a supportive environment for staff and families so that they can engage in effective communication, problem-solving and teaming.
- 4.01(5) Health, safety and nutrition: Optimal child development is enhanced if young children are safe from physical and emotional harm. In designing learning environments and experiences for young children, meeting the health, safety and nutritional needs are critical to child growth, development and learning. Environments for young children should be safe from hazards and potential injuries to enable them to explore and learn. Programs should ensure that children are protected from infectious diseases through the implementation of appropriate health, safety and sanitation policies, procedures and daily practices. ECE professionals should work in partnership with families and communities to create healthy, safe and nutritionally sound environments, while honoring family preferences for their children. ECE professionals establish a foundation for future healthy lifestyles and a pathway for lifelong health and well-being.
- 4.01(6) Professional development and leadership: ECE professionals who identify and conduct themselves as professionals play an important role in the growth, development and learning of children. ECE professionals see themselves as members of the larger community of specialized care and education professionals and have a full understanding of the context in which the early childhood profession originated. Those working in the field adopt professional responsibilities, which include adherence to ethical codes of conduct, advocacy and the effective communication of the importance of high-quality early childhood programming. The knowledge achieved in the profession is based on a foundation of research-based practices that is then implemented in all aspects of child, family, colleagues and community involvement. ECE professionals equipped with specialized education, training and coaching/mentoring are better able to provide environments and experiences that support every aspect of a child's growth, development and learning, including aspects related to a child's and family's diverse needs. Participation in advocacy efforts on behalf of children, families and the profession are critical to advancing the knowledge regarding the importance of high-quality early childhood education.
- 4.01(7) Program planning and development is vital to high-quality early childhood programs. Sustaining a philosophical base that utilizes research-driven practices with clear goals and objectives while striving for continuous quality improvement helps to ensure high-quality programming for children and their families. An important responsibility of an early childhood professional is to know and

uphold rules, regulations and high-quality standards within the daily operations of the program. Professionals implementing best practices and upholding high-quality standards helps to create high-quality early care and learning environments. Participation in a strong strategic planning process that includes colleagues, community resources, and specialists and takes into account various aspects of organizational, personnel, and financial management is essential.

- 4.01(8) Teaching practices: ECE educators are responsible for planning, implementing and supporting intentional experiences that promote children's growth, development and learning in all developmental and academic domains as defined by the Colorado academic standards. Understanding that children learn from a supportive physical, social and temporal environment, it is important that ECE professionals create opportunities where all children can play interactively, communicate, create, explore and construct knowledge and skills to better understand their world. Establishing a learning environment with regard for student perspectives and that honors all children's individual cultures, strengths, languages, needs and interests and reflects diversity also helps to build a responsive early childhood setting. Planning and implementing a curriculum that responds to the developmental needs of each child and allows children to construct knowledge, skills, concepts, attitudes and dispositions through intentional experiences enhances the learning environment. Teaching practices reflect Colorado Teacher Quality Standards for effective teaching.
- 4.01(8)(a) Planning framework for curricula and learning environment: ECE professionals will plan, implement and evaluate intentional and differentiated instruction that supports the holistic development of all children while adhering to children's strengths, challenges, learning preferences and diversity. Curricula and learning will be embedded within the daily routines and natural environments so that learning is authentic, functional and meaningful to the child and family.
- 4.01(8)(b) Physical health development: ECE professionals plan, implement and adapt activities that promote physical development that is appropriate for children of all ability levels and include indoor and outdoor play experiences that are embedded within the daily routines and developmentally appropriate curriculum.
- 4.01(8)(c) Physical proximity and engagement: ECE professionals plan, implement and adapt activities that promote social engagement that is culturally appropriate for the children and families in their care.
- 4.01(8)(d) Language and research-based literacy development: ECE professionals plan, implement and adapt research-driven curricula through meaningful interactions and daily routines to encourage children of all ability levels to use their home language to understand language, various forms of literacy, interact with others and express themselves through verbal, nonverbal and written forms of communication.
- 4.01(8)(e) Cognitive development: ECE professionals plan, implement and adapt developmentally appropriate curricula throughout daily routines so that children of all ability levels are engaged in learning new concepts, completing tasks and adapting information through meaningful experiences and materials.
- 4.01(8)(f) Social-emotional development: ECE professionals plan, implement and adapt meaningful activities that focus on the promotion of self-regulation, pro-social interactions and emotional expression. Children who are socially and emotionally ready for learning and engagement understand and effectively express their feelings, cooperate with adults and peers and resolve conflicts with support.
- 4.01(8)(g) Fostering creativity: ECE professionals plan, implement and adapt curricula that provide children an opportunity to express themselves through a variety of creative means regardless of their individual abilities, language or culture.

4.01(8)(h) Knowledge of productivity: ECE professionals plan and implement a balance of experiences for children that address various levels of play, interactions and activity levels, in addition to responding to the diverse needs of the children in their care.

4.01(8)(i) How children learn and approaches to learning: ECE professionals plan, implement and adapt activities that promote all children's creativity, innovation, curiosity, exploration and problem-solving in learning environments and daily routines.

4.02 Elementary Education Endorsement (Grades K-6)

To be endorsed in elementary education, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program in elementary education including prescribed field experience and student teaching requirements; and have demonstrated the competencies specified below:

4.02(1) The elementary educator is knowledgeable about curriculum development and instruction and is able to:

4.02(1)(a) design and implement an integrated curriculum based upon adopted content standards including, but not limited to, language arts (e.g., reading, writing, speaking and listening), science, mathematics, social studies, the arts, health, physical education and technology.

4.02(1)(b) select and use equipment, materials and technology which support a wide variety of instructional strategies to be implemented based on adopted content standards and on both informal and formal assessments of student learning needs.

4.02(1)(c) implement appropriate strategies and activities to increase student achievement.

4.02(1)(d) understand and adhere to strict data privacy and security practices.

4.02(2) The elementary educator is knowledgeable about child development as it applies to learning and is able to:

4.02(2)(a) incorporate documented and proven theories of child development and learning as appropriate for all learners including, but not limited to, exceptional and linguistically diverse learners.

4.02(2)(b) plan and implement differentiated instructional strategies that address stages of individual development, personal traits and interests, language diversity and exceptionality.

4.02(2)(c) recognize and display respect for family, culture, economic and societal influences that affect students' learning and academic progress and draw upon their strengths and experiences in planning for instruction.

4.02(2)(d) effectively articulate the elements of and rationale for the instructional program to students, parents and other professionals.

4.02(3) The elementary educator is knowledgeable about classroom environment and is able to:

4.02(3)(a) provide a safe and engaging learning environment responsive to individual learner needs and student choices and interests.

4.02(3)(b) effectively utilize developmentally appropriate, learner-responsive time-management techniques.

- 4.02(3)(c) implement positive and effective classroom management strategies that encourage behaviors that will enhance learning for all students.
- 4.02(4) The elementary educator is knowledgeable about assessment and is able to:
 - 4.02(4)(a) effectively administer a wide variety of ongoing formal and informal assessments that are developmentally appropriate, responsive to the needs of diverse learners and inclusive of adopted content standards.
 - 4.02(4)(b) effectively utilize assessment results and related data to plan for appropriate student instruction.
 - 4.02(4)(c) actively involve students in understanding the importance of assessment and its relationship to meeting learning objectives.
 - 4.02(4)(d) effectively communicate with students, parents and other professionals concerning assessments and student performance.
- 4.02(5) The elementary educator is highly knowledgeable about research-based literacy development, is able to develop oral and written learning, as well as:
 - 4.02(5)(a) understand and explain the language processing requirements of proficient reading and writing including phonological (speech sound) processing; orthographic (print) processing; semantic (meaning) processing; syntactic (sentence level) processing; discourse (connected text level) processing.
 - 4.02(5)(b) understand and explain other aspects of cognition and behavior that affect reading and writing including attention, executive function, memory, processing speed and graphomotor control.
 - 4.02(5)(c) define and identify environmental, cultural and social factors that contribute to literacy development (e.g., language spoken at home, language and literacy experiences, cultural values).
 - 4.02(5)(d) know and identify phases in the typical developmental progression of oral language (semantic, syntactic, pragmatic); phonological skill; printed word recognition; spelling; reading fluency; reading comprehension; and written expression.
 - 4.02(5)(e) understand and explain the known causal relationship among phonological skill, phonic decoding, spelling, accurate and automatic word recognition, text reading fluency, background knowledge, verbal reasoning skill, vocabulary, reading comprehension and writing.
 - 4.02(5)(f) know and explain how the relationships among the major components of research-based literacy development change with reading development (i.e., changes in oral language, including phonological awareness; phonics and word recognition; spelling; reading and writing fluency; vocabulary; reading comprehension skills and strategies; written expression).
 - 4.02(5)(g) know reasonable goals and expectations for learners at various stages of reading and writing development.
- 4.02(6) The elementary educator is knowledgeable about the structure of language including:
 - 4.02(6)(a) phonology (the speech sound system), and is able to:

4.02(6)(a)(i) identify, pronounce, classify and compare the consonant and vowel phonemes of English.

4.02(6)(b) orthography (the spelling system), and is able to:

4.02(6)(b)(i) understand the broad outline of historical influences on English spelling patterns, especially Anglo-Saxon, Latin (romance) and Greek;

4.02(6)(b)(ii) define grapheme as a functional correspondence unit or representation of a phoneme;

4.02(6)(b)(iii) recognize and explain common orthographic rules and patterns in English;

4.02(6)(b)(iv) know the difference between "high frequency" and "irregular" words; and

4.02(6)(b)(v) identify, explain and categorize six basic syllable types in English spelling.

4.02(6)(c) morphology, and is able to:

4.02(6)(c)(i) identify and categorize common morphemes in English, including Anglo-Saxon compounds, inflectional suffixes, and derivational suffixes; Latin-based prefixes, roots, and derivational suffixes; and Greek-based combining forms.

4.02(6)(d) semantics, and is able to:

4.02(6)(d)(i) understand and identify examples of meaningful word relationships or semantic organization.

4.02(6)(e) syntax, and is able to:

4.02(6)(e)(i) define and distinguish among phrases, dependent clauses, and independent clauses in sentence structure; and

4.02(6)(e)(ii) identify the parts of speech and the grammatical role of a word in a sentence.

4.02(6)(f) discourse organization, and is able to:

4.02(6)(f)(i) explain the major differences between narrative and expository discourse;

4.02(6)(f)(ii) identify and construct expository paragraphs of varying logical structures (e.g., classification, reason, sequence); and

4.02(6)(f)(iii) identify cohesive devices in text and inferential gaps in the surface language of text.

4.02(7) The elementary educator is knowledgeable about the administration and interpretation of assessments for planning instruction, including:

4.02(7)(a) understanding the differences among screening, diagnostic, outcome and progress monitoring assessments.

4.02(7)(b) understanding basic principles of test construction including reliability, validity, norm-referencing and criterion-referencing.

- 4.02(7)(c) understanding the principles of progress monitoring and the use of graphs to indicate progress.
 - 4.02(7)(d) knowing the range of skills typically assessed in terms of phonological skills, decoding skills, oral reading skills, spelling and writing.
 - 4.02(7)(e) recognizing the content and purposes of the most common diagnostic tests used by psychologists and educational evaluators.
 - 4.02(7)(f) interpreting measures of reading comprehension and written expression to make appropriate instructional recommendations.
- 4.02(8) The elementary educator is able to develop phonology, and is able to:
- 4.02(8)(a) identify the general goal of phonological skill instruction and be able to explicitly state the goal of any phonological teaching activity.
 - 4.02(8)(b) know the progression of phonological skill development (i.e., rhyme, syllable, onset-rime, phoneme differentiation).
 - 4.02(8)(c) identify the differences among various phonological manipulations, including identifying, matching, blending, segmenting, substituting and deleting sounds.
 - 4.02(8)(d) understand the principles of phonological skill instruction: brief, multisensory, conceptual and auditory-verbal.
 - 4.02(8)(e) understand the reciprocal relationship among phonological processing, reading, spelling and vocabulary.
 - 4.02(8)(f) understand the phonological features of a second language, such as Spanish, and how they interfere with English pronunciation and phonics.
- 4.02(9) The elementary educator is able to develop phonics and word-recognition knowledge related to reading including:
- 4.02(9)(a) knowing or recognizing the appropriate sequence of phonics concepts from basic to advanced.
 - 4.02(9)(b) understanding principles of explicit and direct teaching; model, lead, give guided practice and review.
 - 4.02(9)(c) stating the rationale for multisensory and multimodal techniques.
 - 4.02(9)(d) knowing the routines of a complete lesson format, from the introduction of a word-recognition concept to fluent application in meaningful reading and writing.
 - 4.02(9)(e) understanding research-based adaptations of instruction for students with weaknesses in working memory, attention, executive function or processing speed.
- 4.02(10) The elementary educator is able to develop fluent, automatic reading of text:
- 4.02(10)(a) understanding the role of fluency in word recognition, oral reading, silent reading, comprehension of written discourse and motivation to read.

- 4.02(10)(b) understanding reading fluency as a stage of normal reading development, as the primary symptom of some reading disorders and as a consequence of practice and instruction.
- 4.02(10)(c) defining and identifying examples of text at a student's frustration, instructional and independent reading level.
- 4.02(10)(d) knowing sources of activities for building fluency in component reading skills.
- 4.02(10)(e) knowing which instructional activities and approaches are most likely to improve fluency outcomes.
- 4.02(10)(f) understanding techniques to enhance a student's motivation to read.
- 4.02(10)(g) understanding appropriate uses of assistive technology for students with serious limitations in reading fluency.
- 4.02(10)(h) understand the relationship between accuracy and reading fluency.
- 4.02(11) The elementary educator is knowledgeable about vocabulary development related to reading instruction including:
 - 4.02(11)(a) understanding the role of vocabulary development and vocabulary knowledge in comprehension.
 - 4.02(11)(b) understanding the role and characteristics of direct and indirect (contextual) methods of vocabulary instruction.
 - 4.02(11)(c) knowing varied techniques for vocabulary instruction before, during and after reading.
 - 4.02(11)(d) understanding that word knowledge is multifaceted.
 - 4.02(11)(e) understanding the sources of wide differences in students' vocabularies.
- 4.02(12) The elementary educator is able to develop text comprehension including:
 - 4.02(12)(a) being familiar with teaching strategies that are appropriate before, during and after reading and that promote reflective reading.
 - 4.02(12)(b) contrasting the characteristics of major text genres, including narration, exposition and argumentation.
 - 4.02(12)(c) understanding the similarities and differences between written composition and text comprehension, and the usefulness of writing in building comprehension.
 - 4.02(12)(d) identifying in any text the phrases, clauses, sentences, paragraphs and "academic language" that could be a source of miscomprehension.
 - 4.02(12)(e) understanding levels of comprehension including the surface code, text base and mental model (situation model).
 - 4.02(12)(f) understanding factors that contribute to deep comprehension, including background knowledge, vocabulary, verbal reasoning ability, knowledge of literary structures and conventions, and use of skills and strategies for close reading of text.

4.02(13) The elementary educator is able to develop handwriting, spelling and written expression:

4.02(13)(a) handwriting:

4.02(13)(a)(i) knowing research-based principles for teaching letter naming and letter formation, both manuscript and cursive; and

4.02(13)(a)(ii) knowing techniques for teaching handwriting fluency.

4.02(13)(b) spelling:

4.02(13)(b)(i) recognizing and explaining the relationship between transcription skills and written expression;

4.02(13)(b)(ii) identifying students' level of spelling development and orthographic knowledge; and

4.02(13)(b)(iii) recognizing and explaining the influences of phonological, orthographic, and morphemic knowledge on spelling.

4.02(13)(c) written expression:

4.02(13)(c)(i) understanding the major components and processes of written expression and how they interact (e.g., basic writing/transcription skills versus text generation);

4.02(13)(c)(ii) knowing grade and developmental expectation for students' writing in the following areas: mechanics and conventions of writing, composition, revision and editing processes; and

4.02(13)(c)(iii) understanding appropriate uses of assistive technology in written expression.

4.02(14)The elementary educator is knowledgeable about mathematics concepts and able to articulate these concepts as well as concepts that precede and that follow the content they teach, regarding

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4.02(14)(a) counting and cardinality, including:

4.02(14)(a)(i) perceptual and conceptual subitizing, counting and matching, and how these skills are related and developed.

4.02(14)(b) numbers and operations in base ten, including:

4.02(14)(b)(i) the comparison of quantities and less-than and greater-than relationships as an early step toward decomposing and composing numbers in ways that are necessary in common arithmetic procedures;

4.02(14)(b)(ii) the importance of the benchmarks of 5 and 10 as support for seeing numbers as combinations of other numbers;

4.02(14)(b)(iii) that computation includes mental computation, estimation strategies, invented and standard algorithms;

4.02(14)(b)(iv) how efficient base-ten computation methods rely on decomposing numbers and applying properties of operations to decompose the calculation into parts;

4.02(14)(b)(v) how to interpret multiple meanings of fractions, including part-whole relationships, measures, locations on a number line, quotients, ratios and operators; and

4.02(14)(b)(vi) the unit as a foundational concept, especially as it is fundamental to the interpretation of rational numbers.

4.02(14)(c) operations and algebraic thinking, including:

4.02(14)(c)(i) the varied arithmetic problem types such as joining, separating and comparing problems with different parts of a problem situation unknown;

4.02(14)(c)(ii) that the equal sign denotes that two expressions have the same value, avoiding the common misconception of the equal sign as an indication that the answer comes next;

4.02(14)(c)(iii) the rationale behind equivalent fractions and operations with fractions, and how the concept of equivalence supports early algebraic thinking; and

4.02(14)(c)(iv) how to translate and contextualize symbolic representations of phenomena as well as notice mathematical relations and patterns within real-life and problem contexts.

4.02(14)(d) geometry and measurement, including:

4.02(14)(d)(i) how the relationships between parts of two-dimensional shapes define and describe circles, triangles, rectangles, squares, rhombuses, trapezoids, hexagons and other polygons;

4.02(14)(d)(ii) how the relationships between three-dimensional shapes define and describe cubes, prisms, cylinders, pyramids, cones and spheres;

4.02(14)(d)(iii) how the composition and decomposition of shapes underlies the understanding of fractions, coordinate geometry, area measurement and volume; and

4.02(14)(d)(iv) how determining an object's size relates to both the object's measurable geometric attributes and the choice of unit needed to quantify that attribute.

4.02(14)(e) data analysis, including:

4.02(14)(e)(i) that the foundations of statistical reasoning begin with collecting and organizing data to answer a question about our world and then examining the variability of that situation;

4.02(14)(e)(ii) that number and measurement are central to categorizing and understanding data, and data analysis provides a context in which number and measurement are used; and

4.02(14)(e)(iii) how to use data displays to ask and answer questions about data, including the mean, median, interquartile range, and mean absolute deviation, and use these measures to compare data sets.

4.02(15) The elementary educator is knowledgeable of the eight common standards for mathematical practice, including:

[4.02\(15\)\(a\) engaging in appropriate mathematical processes and practices and supporting students in doing the same; and](#)

[4.02\(15\)\(b\) exhibiting productive mathematical dispositions toward the teaching and learning of mathematics to support students' sense making, understanding and reasoning.](#)

[4.02\(16\) The elementary educator is knowledgeable about mathematics-specific pedagogy and practices, including:](#)

[4.02\(16\)\(a\) analyzing the mathematical content of curriculum, including the learning trajectories for key mathematical topics and how they connect to foundational frameworks related to standards, curriculum, and assessment;](#)

[4.02\(16\)\(b\) using research evidenced core set of pedagogical practices that are effective for developing students' meaningful learning of mathematics;](#)

[4.02\(16\)\(c\) using mathematical tools and technology, such as physical models and mathematical representations, that are designed to support mathematical reasoning and sensemaking;](#)

[4.02\(16\)\(d\) understanding students as learners of mathematics, including students' mathematical knowledge, skills and dispositions; and](#)

[4.02\(16\)\(e\) identifying and utilizing acceleration and intervention strategies to help students who are below grade level or struggling in mathematics, children with disabilities, and students who are English language learners.](#)

[4.02\(17\) The elementary educator shall self-assess the effectiveness of instruction based on the achievement of students and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.](#)

4.03 Agriculture, Food and Natural Resources (Grades 7-12)

To be endorsed in agriculture, food and renewable natural resources, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program including prescribed field experience and student teaching requirements; have completed an approved program in agriculture, food and renewable natural resources; and have demonstrated the competencies listed below:

4.03(1) The agriculture, food and renewable natural resources educator must have extensive preparation in agriculture, food and renewable natural resources and demonstrate knowledge in related content including, but not limited to, animal sciences; power, structural and technical systems; plant sciences; agribusiness systems; environmental science and natural resource systems; and food products and processing.

4.03(1)(a) The agriculture, food and renewable natural resources educator must be knowledgeable and able to effectively instruct students about one or more of the following content areas:

4.03(1)(a)(i) animal sciences to include, but not be limited to: trends in the animal industry, best practices for animal welfare, nutrition, reproduction, environmental management and performance;

4.03(1)(a)(ii) agricultural power, structural and technical systems to include, but not be limited to: physical science applications in agriculture PST systems; equipment

operation, repair and maintenance; planning, building and maintaining agriculture structures; agricultural metal fabrication; and operation and utilization of geospatial technologies in agriculture;

4.03(1)(a)(iii) plant systems to include, but not be limited to: crop management planning; plant anatomy, classification and philosophy; propagation, culture and harvest of plant products; and principles of design in plant systems for environmental enhancement;

4.03(1)(a)(iv) agricultural business systems to include, but not be limited to: business management principles; financial and production data collection and recording; credit and cash management; business planning; and sales and marketing;

4.03(1)(a)(v) environmental science and natural resources to include, but not be limited to: natural resources use planning; interrelationships between natural resources and humans; sustainable production and use of natural resources; environmental analytical procedures; tools and equipment; environmental policies and regulations; and environmental service systems; and

4.03(1)(a)(vi) food products and processing to include, but not be limited to: food safety, sanitation and practices; food nutrition; biology, microbiology and chemistry; food processes, storage, distribution and consumption; and food industry scope and development.

4.03(1)(b) The agriculture, food and renewable natural resources educator is knowledgeable about and able to:

4.03(1)(b)(i) ensure that students' work reflects industry standards and that students remain aware of current issues in the field;

4.03(1)(b)(ii) maintain an active advisory committee(s) composed of local business/industry representatives to assure that implementation of the curriculum accurately reflects current industry conditions and standards, and to serve as a resource for the placement of students;

4.03(1)(b)(iii) acquire and allocate supplementary fiscal and human resources, as needed, from and within the school, community and industry;

4.03(1)(b)(iv) provide experiences in simulated or real workplace environments that can provide students with appropriate and applicable firsthand experience to enable them to make career decisions based on a knowledgeable perspective;

4.03(1)(b)(v) provide students with a wide variety of opportunities to gain experience with and be able to exercise initiative in applying the skills and abilities of organizational management and leadership, public speaking and parliamentary procedure, and to earn awards and recognition through participation in student vocational and community service organizations;

4.03(1)(b)(vi) provide students with the ability to evaluate, select, adapt and apply technology as needed;

4.03(1)(b)(vii) incorporate and reinforce practical applications of core content knowledge, skills and abilities in simulated or real-world situations and by coordinating instruction with other educational staff;

4.03(1)(b)(viii) present and discuss controversial issues related to agriculture and renewable resources in the instructional setting with clarity and without bias; and

4.03(1)(b)(ix) maintain a safe, well-equipped and well-maintained learning environment and instruct students in the safe and appropriate use, care and maintenance of tools, equipment and applicable substances and materials.

4.03(2) The agriculture, food and renewable resources educator shall self-assess the effectiveness of instruction based on the achievement of students and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.

4.04 Visual Arts (Grades K-12)

To be endorsed in visual arts, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program including prescribed field experience and student teaching requirements; have completed an approved program in the content of art; and have demonstrated the competencies listed below:

4.04(1) The visual arts educator is knowledgeable about and able to instruct students in:

4.04(1)(a) determining and interpreting meaning in works of art.

4.04(1)(b) creating personal meaning in art.

4.04(1)(c) identifying the variety of viewpoints and philosophies behind works of art.

4.04(2) The visual arts educator is able to effectively inform students about the terminology and facets of art inherent in their own and other works of art including, but not limited to:

4.04(2)(a) the vocabulary and critical language of arts discourse around relevant art processes.

4.04(2)(b) the expressive features and characteristics of art.

4.04(2)(c) the ability to create multiple solutions to visual arts problems.

4.04(3) The visual arts educator is able to effectively instruct students regarding:

4.04(3)(a) the preparation, research, safety, interrelationships, processes and materials applicable to areas of specialization in art including, but not limited to:

4.04(3)(a)(i) drawing, painting, sculpture, photography, printmaking, fibers, ceramics, jewelry, crafts and media arts; and

4.04(3)(a)(ii) appropriate hands-on art experiences taught in a curriculum designed around the state standards and focused on developing cognitive and manipulative skills.

4.04(4) The visual arts educator is able to teach students about the history of art including that in contemporary and past cultures, with an emphasis on:

4.04(4)(a) the contributions of the arts to the development of civilization and culture.

4.04(4)(b) the relationship of the arts to the culture/society in which they originated.

4.04(4)(c) the influence of the arts on subsequent and current culture(s).

4.04(4)(d) how the arts are an academic discipline that can relate, connect and transfer to a multitude of life experiences, subjects and disciplines such as math; science; reading, writing and communicating; and social studies.

4.04(5) The visual arts educator is able to instruct students on the objective and subjective evaluation and critique of art, and how to:

4.04(5)(a) formulate and articulate judgments about works of art based on objective and subjective rationale.

4.04(5)(b) engage in knowledgeable discourse about aesthetics, including the purpose and value of art to the individual and society, from a variety of philosophical stances.

4.04(6) The visual arts educator shall provide students with motivation and encouragement to pursue appropriate forms of self-expression in the visual and other arts.

4.04(7) The visual arts educator shall promote more advanced instruction where appropriate.

4.04(8) The visual arts educator shall self-assess the effectiveness of instruction based on the achievement of students and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.

4.05 Business and Marketing (Grades 7-12)

To be endorsed in business and marketing an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program including prescribed field experience and student teaching requirements; have completed an approved preparation program in business/marketing; and have demonstrated the competencies listed below:

4.05(1) The business/marketing educator must have extensive preparation in business and marketing and be knowledgeable about and able to effectively instruct students in the following content areas:

4.05(1)(a) economics, labor market conditions and micro- and macro-economic factors of a domestic and global economy.

4.05(1)(b) technology and its appropriate applications.

4.05(1)(c) information management.

4.05(1)(d) accounting and finance including the basic functions of auditing, banking, investments, taxation, insurance and risk taking.

4.05(1)(e) personnel policies and human resource management including hiring, staff development, compensation and employee relations.

4.05(1)(f) business communications including the use of technology, written communication and presentation skills.

4.05(1)(g) business law, sales contracts, consumer law, employment (including personnel policies and practices), business organization and related matters.

4.05(1)(h) legislation as it affects business and/or marketing fields and issues.

4.05(1)(i) business and marketing ethics.

4.05(1)(j) new and traditional business and/or marketing options, as related to career skills and abilities and career development.

4.05(1)(k) marketing principles and practices of buyer analysis including, but not limited to, development and distribution of products and services.

4.05(2) The business/marketing educator shall self-assess the effectiveness of instruction based on the achievement of students and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.

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4.07 Drama Theatre Arts (Grades K-12)

To be endorsed in drama theatre arts, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program including prescribed field experience and student teaching requirements; have completed an approved program in drama theatre arts; be knowledgeable about the Colorado Academic Standards in drama and theatre arts and have demonstrated the competencies specified below:

4.07(1) The drama theatre arts educator is knowledgeable about the content and creative processes of drama theatre arts and is able to instruct students about:

4.07(1)(a) historical and cultural context including, but not limited to, global theatrical styles, techniques and traditions over time and acknowledging drama theatre arts in society as creative, expressive, communicable and social.

4.07(1)(b) a variety of approaches to critically analyze, observe and critique a variety of styles, genres, aesthetics and technical design, and uses of drama and theatre arts.

4.07(1)(c) skillful use of drama theatre arts literacy in students, demonstrating ways to read, write and communicate using the language of drama theatre arts.

4.07(1)(d) informed demonstration and identification of a variety of techniques and styles of drama theatre arts with confidence, expression, accuracy and intent.

4.07(1)(e) approaches to design, write, problem-solve and innovate to find their own unique dramatic voice.

4.07(2) The drama theatre arts educator is able to instruct, effectively demonstrate and provide experiences for students in various areas of drama theatre arts pedagogical theory and practice including, but not limited to:

4.07(2)(a) determining and interpreting meaning in dramatic works.

4.07(2)(b) methods of teaching drama theatre arts to students, as age and grade appropriate, and to other educators, as related but not limited to direction and selection of dramatic or theatrical subject matter; communication of ideas through drama and/or theatre; distinguishing theatrical forms and styles; creation of a variety of dramatic and/or theatrical works, employing skills related to dramatic and/or theatrical performances;

evaluation of dramatic and/or theatrical works; and relating drama theatre arts to diverse cultures.

4.07(2)(c) knowledge and method of how drama theatre arts relates, informs, connects and transfers to other subjects and disciplines.

4.07(2)(d) knowledge and the ability to envision and implement the creative cyclical process, including critically responding to dramatic and/or theatrical works, the ability to create dramatic and/or theatrical works; and the ability to perform in a variety of dramatic and/or theatrical works.

4.07(3) The drama theatre arts educator shall facilitate students' learning in order to develop critical-thinking and reasoning skills, information literacy, collaboration, self-direction and invention skills for lifelong learning about drama theatre arts, including the personal pursuit of further experience in drama theatre arts.

4.07(4) The drama theatre arts educator shall self-assess and act upon feedback regarding the effectiveness of instruction, based on the achievement of students, and pursue continuous professional development through appropriate activities and coursework and through participation in relevant professional organizations.

4.08 Computer Science (Grades K-12)

To be endorsed in computer science, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program, including prescribed field experience and student teaching requirements; have completed an approved program in computer science with a concentration in one or more of the content areas outlined in section 4.08(3) of these rules; and have demonstrated the competencies below:

4.08(1) The computer science teacher is knowledgeable about and able to demonstrate:

4.08(1)(a) computational thinking and concepts of programming, including:

4.08(1)(a)(i) problem-solving skills, variables and control structures, abstraction and algorithms;

4.08(1)(a)(ii) code comments, pseudocode, flowcharts and other documentation; and

4.08(1)(a)(iii) testing and debugging;

4.08(1)(b) hardware and software systems, including:

4.08(1)(b)(i) inputs and outputs;

4.08(1)(b)(ii) storage and the process of the transformation of data;

4.08(1)(b)(iii) specific functions and use of hardware; and

4.08(1)(b)(iv) troubleshooting problems;

4.08(1)(c) internet and network systems, including:

4.08(1)(c)(i) the internet's role as facilitator of the transfer of information;

4.08(1)(c)(ii) a network as a series of interconnected devices and the internet as a series of interconnected networks; and

4.08(1)(c)(iii) basic internet safety;

4.08(1)(d) how to collect, store, transform, analyze, evaluate and secure data; and

4.08(1)(e) the impacts of computing, including:

4.08(1)(e)(i) the interaction between human and computing systems;

4.08(1)(e)(ii) the history of computer science;

4.08(1)(e)(iii) equity and access considerations;

4.08(1)(e)(iv) laws and ethics associated with the field of computer science and the ramifications of the misuse of technology; and

4.08(1)(e)(v) tradeoffs between usability and security in hardware, networks and the internet.

4.08(2) The computer science educator is able to:

4.08(2)(a) create and foster an engaging environment in which all students develop the requisite computer science skills to participate more fully in a technologically based collaborative society;

4.08(2)(b) analyze and evaluate computer science curricula to ensure age- and grade-appropriate content;

4.08(2)(c) effectively integrate technology into instructional and assessment strategies, as appropriate to computer science education and the learner;

4.08(2)(d) perform laboratory-based, hands-on activities, including unplugged activities, block-based programming and third-generation programming language, that demonstrate grade-appropriate programming concepts and proficiency; and

4.08(2)(e) implement instructional practices and grade-appropriate applications on the interrelationships between the field of computer science and disparate content areas to:

4.08(2)(e)(i) make concrete and abstract representations; and

4.08(2)(e)(ii) connect computer science with real-world situations.

4.08(3) The computer science educator is knowledgeable and able to effectively instruct students about:

4.08(3)(a) artificial intelligence;

4.08(3)(b) computational sciences;

4.08(3)(c) computer programming;

4.08(3)(d) cybersecurity;

4.08(3)(e) data science;

4.08(3)(f) hardware and network systems;

4.08(3)(g) machine learning; and

4.08(3)(h) robotics.

4.08(4) The computer science educator is knowledgeable about the specific shifts in general instruction practices required for computer science education and is able to help students:

4.08(4)(a) develop resilience and perseverance with regard to computer science and computational learning experiences;

4.08(4)(b) attain a level of comfort with ambiguity and open-ended problems;

4.08(4)(c) see failure as an opportunity to learn and innovate;

4.08(4)(d) understand that computational thinking is a fundamental human ability and does not require a computer, and how that understanding can leverage the power of computers to solve a problem;

4.08(4)(e) recognize that not all problems can be solved computationally; and

4.08(4)(f) understand the role and importance of cybersecurity.

4.08(5) The computer science educator shall self-assess and act upon feedback regarding the effectiveness of instruction based on the achievement of students and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations to keep abreast of the ever-changing developments in technology.

4.09 English Language Arts (Grades 7-12)

To be endorsed in English language arts, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program including prescribed field experience and student teaching requirements; have completed an approved program in English language arts; be knowledgeable about the Colorado Academic Standards in reading, writing and communicating; and have demonstrated the competencies specified below:

4.09(1) The English language arts educator is knowledgeable about the content of the English language arts and is able to develop English language arts skills in students based on an applicable understanding of the history and structure of the English language including, but not limited to, the impact of literary and psycholinguistic, sociolinguistic, cultural, familial and other relevant factors, and is able to:

4.09(1)(a) articulate to students an understanding of the relationships between the English language arts and their applications including, but not limited to, reading, writing, speaking, listening and viewing.

4.09(1)(b) select, adapt and create resources, instructional materials and coursework which provide students at all academic levels with:

4.09(1)(b)(i) multiple and varied ways of reinforcing and adding to English language skills development;

4.09(1)(b)(ii) opportunities to gain an understanding and appreciation of the history, structure and evolving nature of the English language;

- 4.09(1)(b)(iii) the ability to use appropriate variations in language depending on purpose and audience; and
- 4.09(1)(b)(iv) the ability to use standard English language (e.g., usage, grammar, spelling and syntax) when communicating with and understanding others in a variety of formal and informal situations.
- 4.09(2) The English language arts educator is knowledgeable about literature written for adolescents and adults and is able to strategically and with intention present to students an age-appropriate selection of a wide and balanced variety of literary works, authors and genres including, but not limited to:
 - 4.09(2)(a) traditional and contemporary literature, including young adult literature, representing a range of cultures and viewpoints from the United States and other countries.
 - 4.09(2)(b) works of literary theory and literary criticism.
- 4.09(3) The English language arts educator is knowledgeable about appropriate, varied and high-quality literature which can demonstrate to students that literature is central to the humanities and provides a shared reference point from which questions of values, attitudes and beliefs can be explored, and is able to present opportunities for students to:
 - 4.09(3)(a) learn to enjoy and appreciate literature.
 - 4.09(3)(b) gain a critical understanding of a wide variety of literary types, styles and themes – both fiction and non-fiction.
 - 4.09(3)(c) explore, analyze, interpret and evaluate literature.
 - 4.09(3)(d) demonstrate their comprehension of texts in a variety of forms of literature and writings.
 - 4.09(3)(e) use a range of written and oral, formal and informal means of responding to literature.
 - 4.09(3)(f) gain an appreciation of literature that reflects the breadth and diversity of the human experience which serves as a mirror of their own experiences as well as a window into the experiences and perspectives of others.
- 4.09(4) The English language arts educator is knowledgeable about developing students' abilities to read strategically and is able to instruct them about skills related, but not limited to:
 - 4.09(4)(a) analyzing, identifying and clarifying the meaning of texts.
 - 4.09(4)(b) comprehending, interpreting and evaluating texts.
 - 4.09(4)(c) choosing reading materials with increasing sophistication and complexity.
 - 4.09(4)(d) understanding the synergistic relationship between reading and writing.
- 4.09(5) The English language arts educator is knowledgeable about a wide range of readings, from fiction and non-fiction print literature to non-print texts; classical literary genres to those in popular culture; and traditional to contemporary works, and is able to teach students the skills and abilities to:
 - 4.09(5)(a) make sound choices for individual reading.

- 4.09(5)(b) read independently for pleasure, learning and research.
- 4.09(5)(c) develop individual strategies for reading and comprehending texts.
- 4.09(5)(e) ask strategic questions, predict, infer, paraphrase and summarize what is read.
- 4.09(5)(f) use a range of strategies to read with a critical eye to discern the craft of the written piece, rhetorical strategies, authorial intent and literary technique.
- 4.09(5)(g) compare the development of themes, concepts and authors' writing styles by analyzing a variety of literary works.
- 4.09(6) The English language arts educator is knowledgeable about written communication and able to develop skills and abilities including, but not limited to:
 - 4.09(6)(a) effective composition for different purposes and audiences, in a variety of ways and through a variety of genres.
 - 4.09(6)(b) effective writing processes (e.g., planning, drafting, revising, proofreading, editing and publishing).
 - 4.09(6)(c) effective use of the rules of written language.
 - 4.09(6)(d) appropriate and effective thinking skills (e.g., problem-solving, analysis, synthesis, evaluation, etc.) to craft written work.
- 4.09(7) The English language arts educator is knowledgeable about oral communication and is able to develop appropriate student usage thereof including, but not limited to:
 - 4.09(7)(a) employing communication strategies for different purposes and audiences in a variety of formats.
 - 4.09(7)(b) utilizing appropriate oral communication processes (e.g., research, organization, presentation and incorporation of feedback).
 - 4.09(7)(c) applying elements of effective communication (e.g., clarity of thought and speech, appropriateness of language, effective use of voice and articulation, and listening skills).
 - 4.09(7)(d) employing listening and speaking as complementary processes.
- 4.09(8) The English language arts educator is knowledgeable about instructional strategies and is able to instruct so that students develop an appropriate vocabulary consisting of academic language as well as real-world language, and so that students are able to use written and oral language for a variety of communication purposes, by providing them with opportunities to:
 - 4.09(8)(a) practice and gain proficiency in the art of written and oral communication for a variety of purposes and audiences.
 - 4.09(8)(b) reinforce writing and speaking skills to underscore their importance in learning and communicating.
 - 4.09(8)(c) experience thoughtful guided discourse that allows the practice of a variety of communication strategies.

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- 4.09(8)(d) be evaluated on oral presentations and written work based upon a prearranged, clearly defined set of criteria that provides fair, consistent and constructive feedback for improvement.
- 4.09(9) The English language arts educator is knowledgeable about visual communication and information processes and is able to instruct students about:
- 4.09(9)(a) active and constructive viewing and the visual representation of ideas to assure clear understanding of what is intended.
 - 4.09(9)(b) critically evaluating information, media and technology.
 - 4.09(9)(c) utilizing technological resources for the access, selection and application of relevant information.
 - 4.09(9)(d) identifying the influence of mode and style on representation of content.
 - 4.09(9)(e) identifying relevant research for various purposes and materials.
- 4.09(10) The English language arts educator is knowledgeable about technology and media and is able to incorporate them into classroom use and instruction so that students become familiar with visual communication and information processes and are able to:
- 4.09(10)(a) acquire knowledge through the use of a variety of strategies, resources, processes and technologies.
 - 4.09(10)(b) judge the quality, usefulness and appropriateness of media and technology presentations.
 - 4.09(10)(c) use multi-media technology to communicate their own ideas in a variety of ways.
 - 4.09(10)(d) identify visual and electronic texts as significant components of the English language arts and be able to select, analyze and evaluate them based on need or usefulness.
- 4.09(11) The English language arts educator is knowledgeable about student assessments and is able to:
- 4.09(11)(a) develop a variety of ways students may demonstrate mastery appropriate to the English language arts classroom.
 - 4.09(11)(b) articulate the relationship between standards, assessments, curricula and classroom instructional strategies.
 - 4.09(11)(c) analyze and incorporate assessment data:
 - 4.09(11)(c)(i) into the planning for individual and group instruction; and
 - 4.09(11)(c)(ii) into the diagnosis of individual student and group needs to increase and/or enhance achievement including, but not limited to, remediation or acceleration.
 - 4.09(11)(d) incorporate a range of clearly identified, useful, appropriate, fair and equitable assessment methods to provide students:
 - 4.09(11)(d)(i) feedback, guidance and instruction to increase their proficiency in reading, writing, speaking and listening;

4.09(11)(d)(ii) multiple opportunities to create products which demonstrate competence in communication through a variety of means including, but not limited to, audio/visual, written and oral presentation; and

4.09(11)(d)(iii) instruction based on assessments of students' needs and on approved standards for English language arts.

4.09(12) The English language arts educator is knowledgeable about literacy and is able to:

4.09(12)(a) provide students with extensive opportunities to acquire and use language and to evaluate literature and texts through reading, writing, speaking, listening and viewing.

4.09(12)(b) demonstrate and promote a commitment to the development of literacy and its applications.

4.09(12)(c) assist students whose first language is one other than English in developing fluency and competence in English language arts.

4.09(12)(d) develop materials and activities that promote student understanding of the synergistic interrelationship between all of the English language arts as defined in 4.09(1)(a).

4.09(12)(e) assist students in identifying and defining questions related to literature and other texts.

4.09(12)(f) effectively model to students the mastery of English oral and written language.

4.09(12)(g) select, adapt and create resources based on an assessment of student academic needs and relevant to required curricula, age grade-level expectations and levels of English-language proficiency.

4.09(12)(h) refine instruction and instructional materials based on student progress.

4.09(12)(i) create an inclusive, challenging, engaging classroom environment in which individual ideas are encouraged, acknowledged, respected and valued.

4.09(12)(j) incorporate student content standards into ongoing lesson plans.

4.09(12)(k) use assessment results to evaluate and improve teaching effectiveness and to plan for professional growth.

4.09(13) The English language arts educator is able to effectively communicate to students, parents, staff and other interested audiences about curriculum, assessment, class requirements, methods of instructional delivery and high standards and expectations for all students.

4.09(14) The English language arts educator shall self-assess the effectiveness of instruction based on the achievement of students and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.

4.10 World Languages (Grades K-12)

To be endorsed in a world language, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program including prescribed field experience and student teaching requirements; have completed an approved program for the preparation of world language teachers; be knowledgeable about the Colorado Academic Standards for world languages; and have demonstrated the competencies specified below:

4.10(1) Language proficiency: A competent world languages teacher is proficient in the language(s) taught, according to the proficiency guidelines outlined by the American Council of the Teaching of Foreign Languages; is able to communicate effectively in interpersonal, interpretive and presentational contexts at a minimum proficiency level, equivalent to the advanced low level defined by the council's proficiency guidelines; and is able to:

4.10(1)(a) speak in the interpersonal mode of communication (except classical languages such as Greek and Latin, as there is no requirement for them to be spoken in interpersonal mode).

4.10(1)(b) interpret oral, printed and video texts and visual images by demonstrating both literal and figurative or symbolic comprehension.

4.10(1)(c) present oral and written information to audiences of listeners or readers.

4.10(2) Cultures, linguistics, literatures and concepts from other disciplines: A competent world languages teacher demonstrates understanding of the multiple content areas that comprise the field of world language learning, recognizes the changing nature of language and is able to:

4.10(2)(a) demonstrate understanding of the interrelatedness of perspectives, products and practices in the target cultures.

4.10(2)(b) demonstrate target cultural understandings and compare cultures through perspectives, products and practices of those cultures.

4.10(2)(c) identify the linguistic elements of the target language system needed to communicate in a variety of settings.

4.10(2)(d) demonstrate an understanding of linguistics and the changing nature of language, and compare language systems.

4.10(2)(e) identify distinctive viewpoints in the literary texts, films, art works and documents from a range of disciplines available only through the target language.

4.10(2)(f) demonstrate an understanding of texts on literary and cultural themes as well as interdisciplinary topics.

4.10(3) Language acquisition: A competent world languages teacher understands second language acquisition theories and their applications to teaching methodologies, and is able to:

4.10(3)(a) apply second language acquisition theories which can be used to help students develop proficiency, increase knowledge and strengthen cognitive skills.

4.10(3)(b) articulate curriculum and instruction to ensure a sequence of age-appropriate learning experiences, progressing from a simple to a more advanced use of the language.

4.10(3)(c) understand the proficiency range levels as defined by the American Council on the Teaching of Foreign Languages.

4.10(4) Diversity of learners: A competent world languages teacher understands how learners differ in their knowledge, experiences, abilities and approaches to language learning; creates interactive, engaging and supportive learning environments that encourage student self-motivation and promote their language learning and understanding; and is able to:

Commented [TK4]: Colorado does not offer a Greek endorsement, and Greek is indeed still a spoken language.

- 4.10(4)(a) demonstrate an understanding of child and adolescent development to create a supportive learning environment for each student.
 - 4.10(4)(b) create an inclusive, caring, challenging and stimulating differentiated classroom environment in which meaningful communication in the target language occurs and in which all students learn through active participation.
 - 4.10(4)(c) promote a learning environment that encourages lifelong learning and that goes beyond the classroom to include families and communities.
 - 4.10(4)(d) provide learning experiences that reflect learner diversity.
 - 4.10(4)(e) use a variety of language-appropriate resources, available technologies and current state world language standards which meet the instructional and linguistic needs of all students and foster critical and creative thinking.
- 4.10(5) Colorado Academic Standards in world languages in planning and instruction: A competent world languages teacher understands and uses the current Colorado Academic Standards in world languages to make instructional decisions and integrate them into curricular planning, and is able to:
- 4.10(5)(a) demonstrate an understanding of the Colorado Academic Standards in world languages and use them as a basis for instructional planning.
 - 4.10(5)(b) align K-12 world language curriculum and instruction with the Colorado Academic Standards in world languages and local school district policies.
 - 4.10(5)(c) integrate the Colorado Academic Standards in world languages into their classroom practice.
 - 4.10(5)(d) use the Colorado Academic Standards in world languages to select and integrate texts including authentic texts, use technology, and adapt and create instructional materials for use in communication.
- 4.10(6) Assessment of languages and cultures and impact on student learning: A competent world languages teacher designs ongoing assessments using a variety of assessment models to show evidence of K-12 students' ability to communicate in the instructed language in interpersonal, interpretive and presentational modes; expresses understanding of cultural and literary products, practices and perspectives of the instructed language; and is able to:
- 4.10(6)(a) design ongoing, authentic performance assessments using a variety of assessment models for all learners.
 - 4.10(6)(b) reflect on and analyze the results of student assessments and adjust instruction accordingly.
 - 4.10(6)(c) use data to inform and strengthen instruction.
 - 4.10(6)(d) interpret the results of student performances to all stakeholders in the community.
 - 4.10(6)(e) build student responsibility for his/her own learning.
- 4.10(7) Professional learning and reflection: A competent teacher of world languages engages in ongoing professional learning opportunities to strengthen personal linguistic, cultural and pedagogical competence and promote reflection on practice, and in so doing is able to:

- 4.10(7)(a) demonstrate an understanding of the value of professional learning and reflection on instructional practice and professional growth.
- 4.10(7)(b) continually evaluate the effects of personal choices and their impact on student learning.
- 4.10(7)(c) reflectively evaluate the effect and impact of professional learning choices on instructional practice and student achievement.
- 4.10(7)(d) demonstrate an understanding of their professional responsibility to keep current with events relevant to the cultures of the target language.
- 4.10(7)(e) demonstrate an understanding of professional growth opportunities such as membership in professional organizations, accessing professional journals, attending conferences and study and/or travel abroad.
- 4.10(8) Advocacy: A competent teacher of world languages articulates the role and value of languages and cultures to interact successfully in the global community and is able to:
 - 4.10(8)(a) articulate the role and value of languages and cultures in preparing students to interact in the global community.
 - 4.10(8)(b) foster relationships with school colleagues, families and agencies in the larger community to support students' language learning and student achievement.
- 4.10(9) American Sign Language (ASL). To be endorsed in American Sign Language, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program; have completed an approved program for the preparation of American Sign Language teachers including prescribe field experience and student teaching requirements; and have demonstrated the competencies for American Sign Language.
- 4.10(10) The world language educator shall self-assess the effectiveness of instruction based on the achievement of students and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.

4.11 Health (Grades K-12)

To be endorsed in health, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program including prescribed field experience and student teaching requirements; have completed an approved program in health; be knowledgeable about the Colorado Academic Standards in comprehensive health and physical education and have demonstrated the competencies specified below:

- 4.11(1) The health educator is knowledgeable about the content of physical and mental health and is able to incorporate the following into the various aspects of health instruction and delivery, with recognition of the cultural, societal and familial sensitivity necessary to handle often controversial subject matter with students of differing personal characteristics and circumstances, backgrounds and developmental stages:
 - 4.11(1)(a) information about ecology and its interaction with society as related, but not limited to, studies in such fields as the biological and behavioral sciences.
 - 4.11(1)(b) bases for students to make informed and healthy life choices about current and continuing health issues of individuals in a society including, but not limited to: physical,

emotional and social health; alcohol, tobacco and other controlled substances; prescription medication; wellness, nutrition and exercise; disease prevention and control; and communicable and non-communicable diseases.

4.11(1)(c) information on individual rights, options and responsibilities with regard to health care.

4.11(1)(d) information about physical and psychological human growth and development, as well as the status of and matters related to individual, self-monitored and family health, as relevant and appropriate to a health curriculum and program and the age and/or grade level of students.

4.11(2) The health educator is knowledgeable about evaluation and identification of criteria for evaluation and is able to articulate effectively to students regarding the use of valid and reliable health information and resources including, but not limited to:

4.11(2)(a) consumer health; public and school health care programs; informed selection of health products and services; consumer protection agencies and other related resources; health fallacies and superstitions; health insurance and plans; health care systems; health care-related technology; and accurate information-technology and other informational sources.

4.11(2)(b) identification of emerging health problems and issues in general, and specifics related to urban, suburban and rural areas.

4.11(3) The health educator is knowledgeable about and is able to effectively articulate to students the dynamics of accidents and how to create conditions conducive to safe living.

4.11(4) The health educator is knowledgeable about and able to effectively promote health and health care careers to students.

4.11(5) The health educator must be able to effectively integrate into instruction the following skills: collaboration, critical thinking and reasoning, information literacy, self-direction and invention.

4.11(6) The health educator shall self-assess the effectiveness of instruction based on the achievement of students and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.

4.12 Family and Consumer Sciences (Grades 7-12)

To be endorsed in family and consumer sciences, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program including prescribed field experience and student teaching requirements, which must include but not be limited to general career/technical knowledge about the world of work and the skill and processes that cut across industries, as well as industry-specific knowledge and demonstrations of proficiency in the use of a variety of technological applications in a lab and/or natural setting; have completed an approved program in family and consumer sciences; and have demonstrated the competencies listed below:

4.12(1) The family and consumer sciences educator must have extensive preparation in family and consumer sciences and be knowledgeable about and able to effectively instruct students regarding the following content areas:

4.12(1)(a) human development and parenting including, but not limited to:

- 4.12(1)(a)(i) theories, principles and sequences of human development – prenatal through late adulthood – and family structures and functions, as they influence, support and/or inhibit human development;
 - 4.12(1)(a)(ii) the family as the basis of a strong society including, but not limited to, the historical and cultural elements of family structures; what is essential for a healthy marriage (i.e., commitment and determination to build a long-lasting relationship); role expectations; nuclear and extended family interactions; and universal core values (e.g., caring, responsibility, respect, trust, relationships, et.al.);
 - 4.12(1)(a)(iii) cultural and individual community differences; social issues; ethical conduct; and legal rights, obligations and responsibilities;
 - 4.12(1)(a)(iv) selection of a spouse and development of a parenting partnership;
 - 4.12(1)(a)(v) developmentally appropriate parenting skills including, but not limited to nurturing, intellectual and creative stimulation; health, nutrition and exercise; safety and constructive discipline of children; and
 - 4.12(1)(a)(vi) strategies for balancing work and family life including, but not limited to time and financial management and criteria for evaluating family support services (e.g., child and elder care).
- 4.12(1)(b) nutrition and foods including, but not limited to:
- 4.12(1)(b)(i) food chemistry, preparation, packaging, food allergies, the global market and biotechnology;
 - 4.12(1)(b)(ii) dietary elements and determination of adequacy; sources and functions of nutrients; criteria for making appropriate nutritional, fitness/exercise and wellness choices -- with recognition given to cultural considerations and style of life -- and health and nutrition-related issues, conditions and diseases;
 - 4.12(1)(b)(iii) food safety, personal hygiene and safety practices/standards according to industry standards, including official and/or accepted industry hygiene standards; and
 - 4.12(1)(b)(iv) use of cooking tools and equipment; methods and terminology; use and conversion of recipes; incorporation of research, preparation, product and general technology; evaluation, use and preparation of convenience foods; and the basic skills of food preparation, balance, portion control and presentation.
- 4.12(1)(c) resource management including, but not limited to:
- 4.12(1)(c)(i) personal finance management principles and skills of the various life stages, such as budgeting, banking, saving and investment, credit (its use and misuse), insurance, taxes, estate planning and consideration of the effect of legislation, public policy and economic conditions on personal financial choices;
 - 4.12(1)(c)(ii) consumer market skills such as rights and responsibilities, laws and public policy, comparative shopping, evaluation of advertising claims and consumer complaints, resources and options;

- 4.12(1)(c)(iii) consumer resource management skills such as values and goals, community resources, sound criteria for decision-making and information, technology and human resources;
- 4.12(1)(c)(iv) the active role consumers can play in business and public decision-making and policy-formation with regard to housing, clothing, transportation, energy conservation, environmental issues, etc.;
- 4.12(1)(c)(v) the principles and elements of design as applied to clothing and the housing environment and the consideration and selection of clothing and housing, as based on historical, psychological, physical, social and cultural needs in accordance with personal preference; and
- 4.12(1)(c)(vi) selection, use, care and disposal of fibers, fabrics and finishes as specifically applied to clothing and to the housing environment.

4.12(1)(d) interpersonal relationships including, but not limited to:

- 4.12(1)(d)(i) individual self-concept, wellness and responsible decision-making related to personal choices throughout various life stages in areas such as substance abuse, sexuality, violence and conflict resolution;
- 4.12(1)(d)(ii) personal goal-setting and decision-making; work ethic; communication, leadership, teamwork and negotiations skills; and coping strategies to handle and manage peer pressure, change and crisis situations; and
- 4.12(1)(d)(iii) cultural and style of life choices, social issues, and legal and ethical rights and responsibilities in a variety of life-affecting situations.

4.12(2) The family and consumer sciences educator is able to:

- 4.12(2)(a) use a variety of applicable assessment strategies to determine the learning needs, comprehension and levels of experience of participating students.
- 4.12(2)(b) design programs and activities for students that incorporate core and other academic skills and abilities with career/technical content to provide students relevant and current information about the key issues, concepts, competencies and skills necessary for personal application by the student and/or for work/employment in a specific industry.
- 4.12(2)(c) instruct students about employment basics and employability skills, family and consumer studies career pathways and qualities necessary to function in the work place.
- 4.12(2)(d) inform students about careers in family and consumer sciences professions and related fields, such as service-oriented industries, and about the role professional organizations play in the field.
- 4.12(2)(e) evaluate, purchase and maintain an inventory of appropriate equipment, technology, materials and products.
- 4.12(2)(f) demonstrate for and instruct students about necessary safety practices and procedures.
- 4.12(2)(g) demonstrate for and instruct students in the proper identification, storage, handling, use and disposal of food.

4.12(2)(h) articulate to students a well-founded philosophy regarding career and technical education to keep students aware of current issues in the field and present relevant and appropriate issues with clarity and without bias.

4.12(2)(i) arrange for and supervise relevant and appropriate experiences and opportunities in simulated or real-world environments to help students base their decision-making on first-hand knowledge and sound criteria, by providing:

4.12(2)(i)(i) coordination for cooperative/internship programs and off-site experiences for students by maintaining business/industry/inter-and intra-school partnerships and/or other community and school district contacts;

4.12(2)(i)(ii) students with a wide variety of opportunities to gain experience with and be able to exercise initiative in applying the skills and abilities required in family and consumer sciences, and to earn awards and recognition, through participation in student vocational and/or community service organizations; and

4.12(2)(i)(iii) supervision of students during community service, travel, conferences and related instructional family and consumer sciences activities.

4.12(3) The family and consumer sciences educator is able to demonstrate the value of family and consumer sciences professions by seeking professional development and by remaining current in the field and participating in appropriate professional organizations.

4.12(4) The family and consumer sciences educator is able to develop additional resources, as appropriate and necessary, from and within the community and the school itself.

4.12(5) The family and consumer sciences educator shall self-assess the effectiveness of instruction based on the achievement of students and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.

4.13 Technology Education (Grades 7-12)

To be endorsed in technology education, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program including prescribed field experience and student teaching requirements; have completed an approved program in technology education; and have demonstrated the competencies specified below:

4.13(1) Knowledge: The beginning technology educator must have:

4.13(1)(a) a basic understanding of the history of technology education and the historical development and trends of technology and technology education.

4.13(1)(b) extensive preparation in technology systems and processes and demonstrate applied knowledge with respect to the following areas:

4.13(1)(b)(i) communication/information including verbal, written, graphic and electronic components;

4.13(1)(b)(ii) transportation including power, energy and mechanical systems; and

4.13(1)(b)(iii) production including construction, manufacturing, authoring, design and prototyping.

- 4.13(1)(c) additional preparation and demonstrated applied knowledge in the natural physical sciences, including environmental science, as used in technological systems and processes.
- 4.13(1)(d) additional preparation and demonstrated applied knowledge in mathematics as used in technological systems and processes.
- 4.13(1)(e) extensive preparation in the principles of contextual learning methodology.
- 4.13(1)(f) a knowledge and understanding of workforce preparation documents and employability skills and standards.
- 4.13(1)(g) a basic understanding of the principles of high-productivity organizations from business and industry.
- 4.13(1)(h) a basic understanding of the economic, political and legal consequences inherent within the application of technological systems and processes to our society.
- 4.13(1)(i) extensive preparation in application of the various tools accessible by students to facilitate improved self-learning.
- 4.13(1)(j) a basic understanding of the methodologies of research into projected developments and applications of emerging technologies.
- 4.13(1)(k) an understanding of good questioning skills and techniques to be used with students and peers to collect, organize and interpret information.
- 4.13(1)(l) the knowledge and understanding to organize and manage a student organization.
- 4.13(2) Performance: The beginning technology educator is able to:
 - 4.13(2)(a) manage all student work areas in a safe and prudent manner and guide students in the safe use of tools, systems and processes in school-based and work-based learning sites.
 - 4.13(2)(b) guide students to become knowledgeable in:
 - 4.13(2)(b)(i) the application of academic concepts from math, science and communications as they apply to technological systems and processes;
 - 4.13(2)(b)(ii) the allocation of resources such as time, money, materials, facilities and human resources;
 - 4.13(2)(b)(iii) the acquisition, evaluation, organization, interpretation and communication of information related to technological systems and processes;
 - 4.13(2)(b)(iv) the selection and application of technology appropriate to tasks;
 - 4.13(2)(b)(v) the maintenance of systems of information, technology and records; and
 - 4.13(2)(b)(vi) the application of relevant conflict resolution techniques as applied to the workplace.
 - 4.13(2)(c) work as a team member in conjunction with academic and other occupational educators to develop systems that support learning across curricular disciplines.

- 4.13(2)(d) demonstrate competency in the management of equipment, materials, supplies and people.
- 4.13(2)(e) demonstrate good questioning skills and techniques to be used with students and peers to collect, organize and interpret information.
- 4.13(2)(f) employ interpersonal and organizational skills to develop an ongoing working relationship with community business and industry partners.
- 4.13(2)(g) communicate the possible career pathways for students entering an occupation in the communications, transportation, architecture, construction, manufacturing and environmental areas.
- 4.13(2)(h) guide students in the use of communication technologies to research occupational clusters occupational opportunities.
- 4.13(2)(i) guide students to develop problem-solving techniques or adopt problem-solving techniques from other sources.
- 4.13(2)(j) demonstrate the proper use of tools, systems and processes appropriate to the course content with respect to the acceptable standards of business and industry.
- 4.13(2)(k) construct individual and cooperative learning experiences which integrate school-based and work-based learning for students utilizing student-centered approaches.
- 4.13(2)(l) reinforce the academic concepts by demonstrating their practical applications.
- 4.13(3) The technology educator shall self-assess the effectiveness of instruction based on the achievement of students and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.

4.14 Secondary Mathematics (Grades 7-12)

To be endorsed in secondary mathematics, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program, including prescribed field experience and student teaching requirements; have completed an approved program in mathematics; be knowledgeable about the Colorado Academic Standards in mathematics in grades 7 through 12; and have demonstrated the competencies specified below:

- 4.14(1) Develop in students an understanding and use of:
 - 4.14(1)(a) number sense, properties and operations.
 - 4.14(1)(b) patterns, functions and algebraic structures.
 - 4.14(1)(c) measurement.
 - 4.14(1)(d) data analysis, statistics and probability.
 - 4.14(1)(e) functions and use of variables.
 - 4.14(1)(f) shape, dimension and geometric relationships.
- 4.14(2) The mathematics educator is able to effectively demonstrate to students and instruct:

- 4.14(2)(a) approaches to problem-solving that utilize mathematical content in identifying, analyzing, formulating and solving problems that occur in mathematical processes and everyday situations.
- 4.14(2)(b) the utilization of mathematical ideas, both verbally and in writing, using both everyday language and mathematical terminology.
- 4.14(2)(c) the utilization of verbal and written discourse, between teacher and students and among students, to develop and extend students' mathematical understanding.
- 4.14(2)(d) the construction and evaluation of mathematical conjectures and arguments to validate one's own mathematical thinking.
- 4.14(2)(e) independent study in mathematics.
- 4.14(2)(f) the use of mathematics in studying patterns and relationships.
- 4.14(2)(g) the interrelationships within mathematics; how to connect concrete, pictorial and abstract representations; and the connections between mathematics and other disciplines and real-world situations through the selection of appropriate applications from such fields as natural sciences, social sciences, business and engineering, and is able to:
 - 4.14(2)(g)(i) utilize a wide variety of resource materials, including, but not limited to, manipulative materials, graphing calculators, computers and other technologies as tools in learning and for the application(s) of mathematics;
 - 4.14(2)(g)(ii) utilize assessment data to monitor students' acquisition of mathematical skills and abilities and in the process of determining appropriate delivery of instruction based on identified student need and to select appropriate mathematical tasks to reinforce and promote students' development of mathematical concepts and skills;
 - 4.14(2)(g)(iii) create an engaging and effective environment in which all students develop mathematically in order to participate more fully in a technologically based society;
 - 4.14(2)(g)(iv) create an environment in which reflection, uncertainty and inquiry are incorporated in the learning of mathematical skills, abilities and concepts; and
 - 4.14(2)(g)(v) apply appropriate knowledge of current research in the teaching and learning of mathematics and incorporate national, state and local guidelines related to mathematics instruction.

4.14(3) [The secondary mathematics teacher is knowledgeable about curriculum and planning and trained in evidence-informed practices in mathematics, including identifying and utilizing acceleration and intervention strategies to help students who are below grade level or struggling in mathematics, children with disabilities and students who are English language learners.](#)

Commented [KT5]: Per 22-60.5-121(2)(h), C.R.S.

4.14(4) The mathematics educator shall consistently seek out professional development in the field of mathematics, which can provide enhanced knowledge, skills and abilities in the content area; and participate in professional organizations appropriate and relevant to the field.

4.15 Music (Grades K-12)

To be endorsed in music, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program including prescribed field experience and student teaching requirements; have completed an approved program in music; be knowledgeable about the Colorado Academic Standards in music; and have demonstrated the competencies specified below:

- 4.15(1) The music educator is knowledgeable about the content and creative processes of music and is able to:
 - 4.15(1)(a) teach the historical and cultural context of music including, but not limited to, global musical styles, techniques and traditions over time and acknowledging music in society as creative, expressive, communicable and social.
 - 4.15(1)(b) use a variety of approaches to critically analyze, observe and critique a variety of styles, genres, aesthetics and technical aspects of music.
 - 4.15(1)(c) develop music literacy in students, demonstrating ways to read, write and communicate using the language of music.
 - 4.15(1)(d) provide informed demonstration and identification of a variety of techniques and styles of music with confidence, expression, accuracy and intent.
 - 4.15(1)(e) use a variety of approaches to teach students to design, write, problem-solve and innovate to find their own unique musical voice.
- 4.15(2) The music educator is able to instruct about, effectively demonstrate and provide experiences for students in various areas of music pedagogical theory and practice including, but not limited to:
 - 4.15(2)(a) determining and interpreting meaning in musical works.
 - 4.15(2)(b) methods of teaching music to students, as age and grade appropriate, and to other educators, regarding the direction and selection of musical repertoire; communication of ideas through music; distinguishing musical forms and styles; creation of a variety of musical works; employing skills related to musical performances; evaluation of musical works and relating music to diverse cultures.
 - 4.15(2)(c) knowledge and method of how music relates, informs, connects and transfers to other subjects and disciplines.
 - 4.15 (2)(d) knowledge and the ability to envision and implement the creative cyclical process, including applying and demonstrating a variety of music theory skills, creating musical works; expressing music in a performance setting; and critiquing, evaluating and refining musical works.
- 4.15 (3) The music educator shall facilitate students' learning in order to develop critical-thinking and reasoning skills, information literacy, collaboration, self-direction and invention skills for lifelong learning about music including the personal pursuit of further experience in music.
- 4.15 (4) The music educator shall self-assess and act upon feedback regarding the effectiveness of instruction based on the achievement of students and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.

4.16 Physical Education (Grades K-12)

To be endorsed in physical education, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program including prescribed field experience and student teaching requirements; have completed an approved program in physical education; be knowledgeable about the Colorado Academic Standards in comprehensive health and physical education; and have demonstrated the competencies specified below:

- 4.16(1) The physical education educator is knowledgeable about the content of physical education and is able to:
 - 4.16(1)(a) articulate effectively to students, other educators and interested stakeholders the socio-cultural, philosophical and psychological foundations of physical education, including the historical development of play, games, dance and sports, and the study of human growth and development.
 - 4.16(1)(b) effectively articulate the physical and biological science foundations of physical education including, but not limited to, such areas as human anatomy, exercise physiology, kinesiology and health.
 - 4.16(1)(c) effectively instruct students about the fundamentals of physical movement including the patterns and types of movement, gymnastics, tumbling, games, team and individual sports, physical fitness and perceptual motor activities.
- 4.16(2) The physical education educator is knowledgeable about and able to demonstrate and effectively instruct students at appropriate age/grade levels about:
 - 4.16(2)(a) four or more individual and/or dual activities including, but not limited to, wrestling, track and field, tennis, bowling, golf, badminton, archery, rodeo, gymnastics, aquatics, rhythm, dance, weight-training and fitness.
 - 4.16(2)(b) four or more team sports and/or games including, but not limited to, baseball, softball, basketball, lacrosse, field hockey, water polo, flag and contact football, soccer, volleyball and skiing.
- 4.16(3) The physical education educator is knowledgeable about and able to demonstrate the organization, planning, administering, teaching and evaluating of a program of physical education including, but not limited to:
 - 4.16(3)(a) adaptive physical education.
 - 4.16(3)(b) first aid.
 - 4.16(3)(c) prevention and care of athletic injuries.
 - 4.16(3)(d) rules and officiating.
 - 4.16(3)(e) analyses and techniques involved with competitive sports.
- 4.16(4) The physical education educator provides students with motivation and encouragement to establish attitudes and behaviors and to pursue activities which will result in lifetime fitness.
- 4.16(5) The physical education educator is able to effectively integrate into instruction the following skills: collaboration, critical thinking and reasoning, information literacy, self-direction and invention.

- 4.16(6) The physical education educator shall self-assess the effectiveness of instruction based on the achievement of students and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.

4.17 Science (Grades 7-12)

To be endorsed in science, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program including prescribed field experience and student teaching requirements; have completed an approved program in science; be knowledgeable about the Colorado Academic Standards in science; and have demonstrated the competencies specified below:

- 4.17(1) The science educator is knowledgeable about the content, concepts and skills of the sciences and is able to effectively instruct students regarding physical, life and earth sciences and applicable mathematics.
- 4.17(2) The science educator must have completed an area or areas of concentration in, demonstrate knowledge of, and effectively instruct students about one or more areas selected from:
- 4.17(2)(a) physics including, but not limited to, general and experimental physics, mechanics, electricity, magnetism, quantum and atomic physics, sound, and optics.
- 4.17(2)(b) chemistry including, but not limited to, general chemistry, organic chemistry, inorganic chemistry, analytical chemistry and physical chemistry.
- 4.17(2)(c) biology including, but not limited to, general biology, environmental biology, biotechnology, genetics, evolution, human anatomy, ecology, molecular biology, and matter and energy in living systems.
- 4.17(2)(d) earth and space science including, but not limited to, historical and physical geology, astronomy, environmental science, meteorology, oceanography, geomorphology, stratigraphy, mineralogy and earth systems.
- 4.17(2)(e) general science including, but not limited to, general chemistry, physics, biology, earth and space science, environmental science and applicable mathematics.
- 4.17(3) The science educator is knowledgeable about and is able to:
- 4.17(3)(a) effectively articulate to students current issues and events affecting or affected by science; age-/grade-appropriate controversial topics from multiple science perspectives, including historical and philosophical bases; and an analytical approach to students with clarity and without bias.
- 4.17(3)(b) effectively demonstrate to students and instruct students on the use of a wide variety of science tools, primary and secondary source materials, print resources, laboratory and natural settings, and technological resources.
- 4.17(3)(c) effectively instruct students about the design of experiments; data reporting; use of appropriate and relevant technology; interpretation of results; and the steps which may be taken in the presentation of the processes involved and the results obtained.
- 4.17(3)(d) effectively instruct students in core scientific practices which include, but are not limited to, asking questions and defining problems; analyzing and interpreting data; engaging in argument from evidence; constructing explanations and designing solutions; developing

and using models; planning and carrying out investigations; obtaining, evaluating, and communicating information; and using mathematics and computational thinking.

- 4.17(3)(e) effectively integrate technology into instructional and assessment strategies, as appropriate to science education and the learner.
 - 4.17(3)(f) effectively instruct students about the interconnected nature of science as it is practiced and experienced in the real world, including the connections between and among the various science disciplines and within other disciplines.
 - 4.17(3)(g) effectively demonstrate for and instruct students about the basic elements of the nature of science including, but not limited to, inquiry, curiosity, discovery, openness to new ideas and skepticism.
 - 4.17(3)(h) effectively communicate to students the historical and dynamic nature of science.
 - 4.17(3)(i) demonstrate for students the connection between an inquiry-based lesson and a larger conceptual-based module and the linkage of both to state-approved student science academic standards.
 - 4.17(3)(j) effectively demonstrate for and instruct students in the linkage(s) between curriculum, instruction and assessment as they relate to state-approved student science academic standards.
 - 4.17(3)(k) effectively demonstrate for and instruct students about safety considerations in science instruction and in the science classroom including, but not limited to, proper use, storage and disposal or maintenance of biological, chemical and scientific equipment and specimens.
 - 4.17(3)(l) instruct and supervise students in the proper preparation and use of laboratory equipment and materials.
 - 4.17(3)(m) evaluate laboratory settings, equipment, materials and procedures to identify and manage the resolution of potential safety hazards.
 - 4.17(3)(n) provide solutions to equipment problems and be able to make minor adjustments in the operation of equipment.
 - 4.17(3)(o) incorporate into planning information related to state and federal regulations, legal issues and guidelines pertaining to scientific materials and specimens.
- 4.17(4) The science educator shall self-assess the effectiveness of instruction based on the achievement of students and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.

4.18 Social Studies (Grades 7-12)

To be endorsed in social studies, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program including prescribed field experience and student teaching requirements; have completed an approved program in social studies; be knowledgeable about and able to instruct students in the Colorado Academic Standards in social studies; and have demonstrated the competencies specified below:

- 4.18(1) The social studies educator is knowledgeable about social studies including history, geography, political science and economics, and is able to effectively instruct students about:

- 4.18(1)(a) history including, but not limited to, Colorado, the United States and world history.
 - 4.18(1)(b) geography including, but not limited to, cultural and physical geography, human geography and globalization.
 - 4.18(1)(c) political science including, but not limited to, that of the United States and comparative state, local and other national governments.
 - 4.18(1)(d) economics including, but not limited to, that of comparative economic theories, applications and institutions, past and present; micro-, macro-and global economics; and personal financial literacy.
 - 4.18(1)(e) the behavioral and social sciences including, but not limited to, psychology, sociology, anthropology and concepts related and integral to the historical and current organization of culture and society.
- 4.18(2) The social studies educator is knowledgeable about and is able to:
- 4.18(2)(a) effectively demonstrate and instruct students about civil discourse in the classroom, including the utilization of oral and written communication and presentation.
 - 4.18(2)(b) effectively analyze social and historical events from multiple perspectives for students and articulate an appropriate analytical approach with clarity and balance and without bias.
 - 4.18(2)(c) effectively integrate discussion of and address with students grade level/age-appropriate current events and issues, including controversial issues, with clarity and balance and without bias.
 - 4.18(2)(d) effectively instruct students about the use of primary and secondary source documents acquired through appropriate use of technology and other relevant means as part of informed research, and in the acquisition and enhancement of knowledge and skills.
 - 4.18(2)(e) effectively teach students the skills of data analysis and interpretation.
 - 4.18(2)(f) promote to students appropriate, relevant, positive and productive community service and experiences.
 - 4.18(2)(g) provide students with identifiable connections between the various social science disciplines and other disciplines.
 - 4.18(2)(h) implement informal and formal assessment tools relevant and appropriate to the social studies classroom, and apply assessment data to planning for student instruction.
 - 4.18(2)(i) effectively demonstrate and instruct students about elements of social studies applications including, but not limited to, inquiry, an openness to new ideas, skepticism, analysis, problem-solving, decision-making and active citizenship, and provide opportunities for students to utilize these skills.
 - 4.18(2)(j) integrate into instruction and provide opportunities for students to develop the skills of collaboration, critical-thinking and reasoning, information literacy, self-direction and invention.

- 4.18(3) The social studies educator shall self-assess the effectiveness of instruction based on the achievement of students and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.

4.19 Reserved

4.20 Dance (Grades K-12)

To be endorsed in dance, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program including prescribed field experience and student teaching requirements; have completed an approved program in dance; be knowledgeable about and able to instruct students in the Colorado Academic Standards in dance; and have demonstrated the competencies specified below:

- 4.20(1) The dance educator is knowledgeable about the art of dance and is able to:
- 4.20(1)(a) teach the historical and cultural context including, but not limited to, global dance styles and traditions over time, acknowledging dance in society as creative, expressive, communicable and social.
 - 4.20(1)(b) instruct students to use criticism and analysis to reflect upon and understand new works, reconstructions and masterpieces.
 - 4.20(1)(c) apply the skillful use of dance literacy and the use of traditional and/or non-traditional notation systems via words, symbols and/or media technology.
 - 4.20(1)(d) implement the choreographic process as the art of making dance using form, intent, dynamics and principles of time, space and energy, structure and design.
 - 4.20(1)(e) help students develop the skills and technique that produce competence and confidence during performance, and the ability to communicate choreographic intent.
- 4.20(2) The dance educator is able to instruct, effectively demonstrate and provide experiences for students in various areas of dance pedagogical theory and practice including, but not limited to:
- 4.20(2)(a) dance theory aligned with safe and developmentally appropriate pedagogical approaches.
 - 4.20(2)(b) methods of teaching dance to students, as age and grade appropriate, and to other educators as related, but not limited to, the creative process; direction and selection of all performance repertoire and productions in the school setting; and performance, evaluation, choreography, and cultural and historical context.
 - 4.20(2)(c) knowledge and method of how dance relates, informs, connects and transfers to other subjects and disciplines.
 - 4.20(2)(d) knowledge and the ability to envision and implement the creative cyclical process, including the skills of movement, technique and performance; the ability to create, compose, and choreograph; an understanding of historical and cultural context, and the ability to reflect, connect and respond.
- 4.20(3) The dance educator shall facilitate students' learning in order to develop critical-thinking and reasoning skills, information literacy, collaboration, self-direction and invention skills for lifelong learning about dance including the physical benefits and personal pursuit of further experience in dance.

- 4.20(4) The dance educator shall self-assess and act upon feedback regarding the effectiveness of instruction based on the achievement of students and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.

4.21 Culturally and Linguistically Diverse Education (Grades K-12)

To be endorsed in culturally and linguistically diverse (CLD) education, an applicant must hold an earned bachelor's degree or higher from an accepted institution of higher education; must hold a Colorado initial or professional teacher or special services license; and must have demonstrated competencies specified below by completion of a Colorado State Board of Education-approved program for the preparation of an educator of culturally and linguistically diverse student populations in accordance with 3.02(1) or by verification of 24 semester hours of specific coursework from an accepted institution of higher education as determined by the Department of Education through a transcript review in accordance with 3.02(2)(a).

- 4.21(1) The educator of CLD student populations must be knowledgeable about, understand and be able to use the major theories, concepts and research related to language acquisition and language development for CLD students. In support of student learning, the candidate must demonstrate understanding and ability to implement research-based knowledge about:
- 4.21(1)(a) linguistics that include orthography, phonology, morphology, vocabulary, syntax, semantics and pragmatics applied to English language development for culturally and linguistically diverse students.
 - 4.21(1)(b) instructional practices that support acquisition of English language as an additional language for CLD students.
 - 4.21(1)(c) written and oral discourse that includes intention and functions of speech, genres and organizational features and patterns.
 - 4.21(1)(d) sociolinguistics that include cultural references, register, varieties of dialects and accents, and nonverbal communication.
- 4.21(2) The educator of CLD student populations must be knowledgeable about, understand and be able to apply the major theories, concepts and research related to research-based literacy development for CLD students. In support of student learning, the CLD educator must demonstrate understanding and ability to implement research-based knowledge about:
- 4.21(2)(a) research-based literacy instruction including the identification and use of linguistic interdependence to support development of the components of language development (listening, speaking, reading, writing and critical-thinking) in English for CLD students.
 - 4.21(2)(b) the basic elements of research-based literacy and the ability to provide effective instruction that is systematic, explicit, comprehensive and effective in support of the English language developmental needs of CLD students.
 - 4.21(2)(c) language and literacy development for CLD students for social and instructional purposes in the school setting, with an emphasis on communication of information, ideas and concepts necessary for academic success, particularly in language arts, mathematics, science and social studies.
 - 4.21(2)(d) the contribution of native language to acquisition of English as an additional language.
 - 4.21(2)(e) the distinction between language differences and learning disabilities.

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- 4.21(3) The educator of CLD student populations must understand and implement strategies and select materials to aid English language and content learning. In support of student learning, the CLD educator must demonstrate understanding of and the ability to implement research-based knowledge about:
- 4.21(3)(a) the functions of the English language to second language learners to support their development of both social and academic language skills.
 - 4.21(3)(b) effective instructional techniques, methodologies and strategies to develop English language literacy and to meet the diverse needs of second language learners, including those students with learning disorders.
 - 4.21(3)(c) effective instruction and instructional planning that is systemic, sequential, well-articulated and delivered in an engaging environment.
 - 4.21(3)(d) selection and utilization of instructional materials and resources that are age-, grade level- and language proficiency-appropriate, that are aligned with the curriculum, English language proficiency standards and English language arts content standards, and that maintain and/or improve student achievement.
 - 4.21(3)(e) maintenance and support of high academic performance standards and expectations for CLD student populations.
 - 4.21(3)(f) providing instructional strategies that integrate the development of English language literacy and content literacy to improve student access to content curricula, particularly in language arts, mathematics, science and social studies.
- 4.21(4) The educator of CLD student populations must be knowledgeable about, understand and be able to apply the major theories, concepts and research related to culture, diversity and equity in order to support academic access and opportunity for CLD student populations. In support of student learning, the CLD educator must be able to demonstrate knowledge and understanding of:
- 4.21(4)(a) Colorado state law and federal law, history and socio-political context related to CLD student populations, education, multicultural education and bilingual education.
 - 4.21(4)(b) the role of culture in language development and academic success.
 - 4.21(4)(c) the relation of cultural identity and heritage language to English language learning and academic success.
 - 4.21(4)(d) the contribution of heritage language maintenance to the development of English language literacy.
 - 4.21(4)(e) the relationship of culture to family and community involvement in schools in order to communicate, collaborate and enhance parental involvement.
- 4.21(5) The educator of CLD student populations must be knowledgeable about, understand and be able to use progress monitoring in conjunction with formative and summative assessments to support student learning. In support of student learning, the candidate must demonstrate knowledge and ability to:
- 4.21(5)(a) assist content teachers in the interpretation of summative assessments of content knowledge, including national content assessments and Colorado-approved content assessments, for the purpose of guiding instruction and learning for CLD students.

4.21(5)(b) administer and interpret the results of summative assessments of English language proficiency, including national and Colorado-approved content assessments for the purpose of assessing English proficiency and guiding instruction.

4.21(5)(c) develop, administer and interpret the results of formative assessments and progress monitoring of English language proficiency that are appropriate for the language proficiency level of the student for the purpose of guiding instruction.

4.21(5)(d) communicate and collaborate with other educators, special services providers and student population family members to identify and assist in the implementation of a comprehensive instructional plan that responds to the socio-economic, academic and linguistic needs of CLD students.

4.21(6) The culturally and linguistically diverse education educator shall self-assess the effectiveness of instruction based on the achievement of students and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.

4.22 Culturally and Linguistically Diverse (CLD) Bilingual Education Specialist (Grades K-12)

To be endorsed as a CLD bilingual education specialist, an applicant must hold an earned bachelor's degree or higher from an accepted institution of higher education; must hold a Colorado initial or professional teacher license; must have completed an approved program for the preparation of an educator of bilingual education; and must have demonstrated the competencies specified below:

4.22(1) The CLD bilingual education specialist must be knowledgeable about and able to demonstrate:

4.22(1)(a) a high level of proficiency in the standards noted in rule 4.22(1)-(5);

4.22(1)(b) ability to implement research-based knowledge to effectively deliver literacy and content instruction in a heritage language of a current Colorado student population;

4.22(1)(c) research-based knowledge and ability to utilize students' heritage language to help them transition skills and strategies learned in the heritage language to literacy and content areas in English;

4.22(1)(d) demonstrate the research-based knowledge and ability to plan and implement lessons to help students make cross-language connections;

4.22(1)(e) a high level of biliteracy and academic language proficiency in English and in one other heritage language used by Colorado students – as determined by the Department -- including, but not limited to, reading, writing, listening, oral communication and critical thinking;

4.22(1)(f) understanding and ability to implement research-based knowledge to discriminate between effective and ineffective bilingual programs in order to develop and deliver effective research-informed structures and programs that support bilingual development;

4.22(1)(g) proficiency and ability to teach in a non-English language; and

4.22(1)(h) understanding of research-based knowledge of the culture and history of a heritage language community of Colorado students.

4.22(2) The culturally and linguistically diverse education bilingual specialist shall self-assess the effectiveness of instruction based on the achievement of students and pursue continuous

professional development through appropriate activities, coursework and participation in relevant professional organizations.

4.23 Middle School Mathematics (Grades 6-8)

To be endorsed in middle school mathematics, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program, including prescribed field experience and student teaching requirements; have completed an approved program in middle school mathematics; be knowledgeable about the Colorado Academic Standards in mathematics grades 6 through 8; and have demonstrated the competencies specified below:

4.23(1) Develop in students an understanding and use of:

- 4.23(1)(a) number and quantity;
- 4.23(1)(b) algebra and functions;
- 4.23(1)(c) measurement;
- 4.23(1)(d) data, statistics, and probability; and
- 4.23(1)(e) geometry.

4.23(2) The mathematics educator is able to effectively demonstrate to students and instruct:

- 4.23(2)(a) approaches to problem-solving that utilize mathematical content in identifying, analyzing, formulating and solving problems that occur in mathematical processes and everyday situations;
- 4.23(2)(b) the utilization of mathematical ideas, both verbally and in writing, using both everyday language and mathematical terminology;
- 4.23(2)(c) the utilization of verbal and written discourse, between teacher and students and among students, to develop and extend students' mathematical understanding;
- 4.23(2)(d) the construction and evaluation of mathematical conjectures and arguments to validate one's own mathematical thinking;
- 4.23(2)(e) independent study in mathematics;
- 4.23(2)(f) the use of mathematics in studying patterns and relationships;
- 4.23(2)(g) the interrelationships within mathematics; how to connect concrete, pictorial and abstract representations; and the connections between mathematics and other disciplines and real-world situations through the selection of appropriate applications from such fields as natural sciences, social sciences, business and engineering, and is able to:
 - 4.23(2)(g)(i) utilize a wide variety of resource materials, including, but not limited to, manipulative materials, graphing calculators, computers and other technologies as tools in learning and for the application(s) of mathematics;
 - 4.23(2)(g)(ii) utilize assessment data to monitor students' acquisition of mathematical skills and abilities and in the process of determining appropriate delivery of instruction based on identified student need and to select appropriate

mathematical tasks to reinforce and promote students' development of mathematical concepts and skills;

4.23(2)(g)(iii) create an engaging and effective environment in which all students develop mathematically in order to participate more fully in a technologically based society;

4.23(2)(g)(iv) create an environment in which reflection, uncertainty and inquiry are incorporated in the learning of mathematics skills, abilities and concepts; and

4.23(2)(g)(v) apply appropriate knowledge of current research in the teaching and learning of mathematics and incorporate national, state and local guidelines related to mathematics instruction.

4.23(3) [The middle school mathematics teacher is knowledgeable about curriculum and planning and trained in evidence-informed practices in mathematics, including identifying and utilizing acceleration and intervention strategies to help students who are below grade level or struggling in mathematics, children with disabilities and students who are English language learners.](#)

Commented [KT6]: Per 22-60.5-121(2)(h), C.R.S.

4.23(4) The mathematics educator shall consistently seek out professional development in the field of mathematics, which can provide enhanced knowledge, skills and abilities in the content area, and participate in professional organizations appropriate and relevant to the field.

4.24 Mentor Teacher (Grades K-12)

To be endorsed as a Mentor Teacher, an applicant must hold a valid Colorado professional teacher license, have completed an approved Mentor Teacher training program provided by an educator preparation program and have demonstrated the competencies below. Upon completion of an approved Mentor Teacher training program, the candidate must also have completed at least one full school year of successful experience serving as a Mentor Teacher for a teacher candidate who is participating in clinical practice.

4.24(1) The mentor teacher develops instructional leadership skills to advance mentoring, the teaching profession, and equitable outcomes for every student.

4.24(1)(a) Develops and continuously pursues professional growth goals and short-term goal setting that are informed by mentor and beginning teacher data of practice and student learning data.

4.24(1)(b) Collects and analyzes mentor and beginning teacher data of practice to inform instructional mentoring decisions that are based on short-term goals and will improve beginning teacher practice and the academic, social, and emotional learning of every student

4.24(1)(c) Supports the work of collaborative partnerships with school and district instructional leaders, teacher leaders, and school communities to advance the teaching profession and advocate for equitable outcomes for every student.

4.24(1)(d) Participates in and contributes to beginning teacher professional learning that is aligned with professional teaching standards, school and district instructional goals, and promotes development of optimal learning environments and rigorous content learning for every student.

4.24(2) Deepens and maintains own expertise around the practices that maximize student achievement including deep content knowledge, social and emotional learning, learner variability, culturally responsive pedagogy, and professional ethics.

- 4.24(2)(a) Deepens and maintains own knowledge of Colorado Academic Standards and evidence outcomes, lessons, and curriculum to ensure that every student has instruction that supports maximum achievement.
- 4.24(2)(b) Deepens and maintains own knowledge of research-based practices that create emotionally, intellectually, and physically safe classroom environments for every student.
- 4.24(2)(c) Engages in district and school-offered professional learning opportunities to deepen and maintain knowledge of strategies and research-based frameworks designed to support the beginning teacher to expect, plan for, and meet the variable learning needs of every student.
- 4.24(2)(d) Deepens and maintains own knowledge of best practices for coaching the beginning teacher in the use of equity principles and culturally responsive pedagogy to identify and address inequitable practices and reflecting on their own practice through an equity lens.
- 4.24(3) Creates and maintains collaborative, respectful, instructionally focused mentoring partnerships to foster beginning teacher ownership of continuous improvement of practice and advance the learning of every student.
 - 4.24(3)(a) Cultivates relational trust, caring, mutual respect, and honesty with the beginning teacher to build ownership, solve problems, and foster beginning teacher agency, resilience, and commitment to the success of every student.
 - 4.24(3)(b) Uses purposeful language and instructionally focused tools and protocols to efficiently and effectively engage the beginning teacher in collaborative, instructionally focused, problem-solving conversations and reflective analysis to promote beginning teacher agency and improved student academic, social, and emotional growth.
 - 4.24(3)(c) Creates strategic, flexible, and individualized mentoring outcomes and plans for meetings with the beginning teacher to address the needs of diverse beginning teacher contexts and advance beginning teacher practice and the learning of every student.
 - 4.24(3)(d) Facilitates reflective conversations about race, culture, and the diversity of the school and community to improve instruction and ensure that every student has what they need to be successful academically, socially, and emotionally.
 - 4.24(3)(e) Utilizes reflective conversations to build the beginning teacher's capacity to create effective partnerships with families and local communities to improve instruction and learning for students of all backgrounds.
- 4.24(4) Builds beginning teacher capacity to advance equitable learning by providing rigorous, standards-aligned instruction that meets the needs of every student.
 - 4.24(4)(a) Advances standards-aligned instruction and student learning of rigorous content by engaging the beginning teacher in ongoing, data-driven teaching-coaching cycles to advance equitable learning for every student.
 - 4.24(4)(b) Builds beginning teacher capacity to advance the learning of every student through use of appropriate assessments of student academic, social, and emotional skills.
 - 4.24(4)(c) Builds beginning teacher capacity to analyze student learning data to guide the planning and delivery of standards-aligned instruction that meets the variable learning needs of every student.

4.24(4)(d) Builds beginning teacher capacity for continuous improvement through meaningful, ongoing, and actionable feedback that is aligned to the professional growth plan that will be used to inform the beginning teacher's annual evaluation.

4.24(5) Builds beginning teacher capacity to advance equitable and inclusive learning by providing an environment that is culturally responsive and meets the diverse academic, social, and emotional needs of every student.

4.24(5)(a) Engages beginning teacher in developing and applying research-based knowledge, skills, and strategies to create emotionally, intellectually, and physically safe learning environments for every student.

4.24(5)(b) Builds beginning teacher capacity to advance equitable and inclusive instruction for every student based on applying principles of equity, culturally responsive pedagogy, and professional ethics.

4.24(5)(c) Builds beginning teacher capacity to establish and maintain an inclusive classroom environment that fosters self-regulation and learner agency.

4.24(5)(d) Builds beginning teacher capacity to equitably meet the diverse learning needs of every student through the instructional use of technology, including the ability to adapt to contexts in which access to technology is limited.

5.00 ~~Special Education (Ages 5-21) and Gifted Education (Ages 4-21) Endorsements (Ages 5-21)~~

5.01 ~~Special Education Core (Ages 5-21) Special Education Generalist (Ages 5-21)~~

~~As outlined in section 22-60.5-106(2) C.R.S., the Department is required to endorse a teacher license with special education if the teacher has completed a program in special education offered by an accepted institution of higher education, which program content has been approved by the Colorado State Board of Education. The following Council for Exceptional Children (CEC) Special Education Preparation Standards and Initial Special Education Knowledge and Skill Common Items (ISCI) were adopted for 9.00 licensing rules.~~

~~The Special Education Core endorsement represents the competencies, knowledge and skills expected of all special education teachers at all levels. The core includes preparation standards in the seven areas of learner development and individual learning differences, learner environments, curricular content knowledge, assessment, instructional planning and strategies, professional learning and practice, and collaboration, and key elements and common items within each standard.~~

~~To hold an endorsement as a special education generalist, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed the coursework and assessments for an approved program for the preparation of special education including prescribed field experience and student teaching; have demonstrated the foundational knowledge and competencies found in 4.02(5) – 4.02(16) of these rules; and have demonstrated the additional competencies specified below:~~

5.01(1) **Learner development and individual learning differences:** Beginning special education professionals ~~are able to articulate their personal philosophy of special education and~~ understand how exceptionalities may interact with development and learning and use this knowledge to provide meaningful and challenging learning experiences for individuals with exceptionalities;
~~and~~

5.01(1)(a) ~~Beginning special education professionals~~ understand how language, culture and family background influence the learning of individuals with exceptionalities;
~~;~~

Commented [KT7]: Per 22-60.5-106, C.R.S., it is the state board's authority to establish by rule and regulation appropriate endorsements and the criteria for such endorsements.

5.01(1)(b) ~~Beginning special education professionals~~ use understanding of development and individual differences to respond to the needs of individuals with exceptionalities ~~and:-~~

5.01(1)(c) ~~Beginning special education professionals~~ are knowledgeable of:

5.01(1)(c)(i) typical and atypical human growth and development;

5.01(1)(c)(ii) similarities ~~and~~ differences ~~and characteristics~~ among individuals with exceptionalities ~~and their typically developing peers, as well as the educational implications of various exceptionalities;~~

5.01(1)(c)(iii) educational implications of characteristics of various exceptionalities;

5.01(1)(c)(iv) family systems and the role of families in supporting development.

5.01(1)(c)(v) cultural perspectives influencing the relationships among families, schools and communities as related to instruction;

5.01(1)(c)(vi) variations in beliefs, traditions and values across and within cultures and their effects on relationships among individuals with exceptionalities, family and ~~schooling~~the educational process;

5.01(1)(c)(vii) characteristics and ~~effects-influences~~ of the cultural and environmental milieu of the individual with exceptionalities and the family;

5.01(1)(c)(viii) similarities and differences of individuals with and without exceptionalities;

5.01(1)(c)(ix) ~~effects of various medications on individuals with exceptionalities~~valid and reliable resources and/or strategies to learn the possible effects of various medications on individuals with exceptionalities;

5.01(1)(c)(x) ~~effects an exceptional condition(s) can have on an individual's life~~effects of growth and development on academic, social and behavioral milestones;

5.01(1)(c)(xi) impact of learners' academic and social abilities, attitudes, interests and values on instruction and career development;

5.01(1)(c)(xii) ~~different ways of learning of individuals with exceptionalities, including those from culturally diverse backgrounds, and strategies for addressing these differences~~unique ways of learning ~~practiced by~~ individuals with exceptionalities, including those from culturally and/or linguistically diverse backgrounds and strategies for addressing these differences; and

5.01(1)(c)(xiii) ~~effects of cultural and linguistic differences on growth and development;~~

5.01(1)(c)(xiv) ~~characteristics of one's own culture and use of language and the ways in which these can differ from other cultures and uses of languages; and~~

5.01(1)(c)(xv) ~~expected~~ ways of behaving and communicating among cultures ~~related to developmental milestones~~ that can lead to misinterpretation and misunderstanding;

5.01(1)(d) demonstrate skills to apply consistent and fair disciplinary practices in the classroom and demonstrate the ability to:

5.01(1)(d)(i) maintain adequate and appropriate data regarding student behavior to determine whether student actions are a manifestation of a disability and/or to address such implication(s) in the expulsion process;

5.01(1)(d)(ii) collect and use student achievement data and incorporate it in the development of individualized education programs (IEPs);

5.01(1)(d)(iii) establish measurable goals, objectives and adaptations based on student need;

5.01(1)(d)(iv) assess and report progress regarding student attainment of annual goals and objectives; and

5.01(1)(d)(v) modify student plans in a timely way based on student data.

5.01(2) **Learning environments:** Beginning special education professionals create safe, inclusive, culturally responsive learning environments so that individuals with exceptionalities become active and effective learners and develop emotional well-being, positive social interactions and self-determination. and:

5.01(2)(a) ~~Beginning special education professionals through collaboration~~ collaborate with general education and other ~~colleagues~~ educational team members to create safe, inclusive, culturally responsive learning environments to engage individuals with exceptionalities in meaningful learning activities and social interactions within the least restrictive environment for each student and promote meaningful inclusion;

5.01(2)(b) ~~Beginning special education professionals use~~ motivational-effective, accessible and age-respectful instructional interventions to teach individuals with exceptionalities how to adapt to different environments.;

5.01(2)(c) ~~Beginning special education professionals know how to~~ intervene safely and appropriately with individuals with exceptionalities in crisis. and

5.01(2)(d) ~~Beginning special education professionals~~ are knowledgeable of:

5.01(2)(d)(i) ~~the~~ demands of a variety of learning environments;

5.01(2)(d)(ii) ~~basic classroom management theories and strategies for individuals with exceptionalities~~ basic classroom management theories and strategies for individuals with exceptionalities;

5.01(2)(d)(iii) ~~effective~~ management of teaching and learning in a variety of settings;

5.01(2)(d)(iv) ~~verbal and non-verbal teacher-adult~~ attitudes and behaviors that influence and/or catalyze the behavior of individuals with exceptionalities;

5.01(2)(d)(v) ~~development and instruction of~~ social skills needed for educational and other environments, such as the workplace, college and the military;

5.01(2)(d)(vi) ~~strategies for crisis prevention and intervention;~~

5.01(2)(d)(vii) ~~strategies for preparing individuals to live~~ harmoniously and productively in a culturally diverse world;

- 5.01(2)(d)(viii).—ways to create learning environments that allow individuals to retain and appreciate their own and each other's respective language and cultural heritage;
- 5.01(2)(d)(ix).—ways cultures are negatively stereotyped, as well as implicit and explicit biases that may impact student behavior; and
- 5.01(2)(d)(x).—strategies used by diverse populations to cope with a legacy of former and continuing racism, as well as the implications and impacts of systemic biases on educational outcomes.
- 5.01(2)(e).—Beginning special education professionals demonstrate the skills to:
- 5.01(2)(e)(i).—create a safe, equitable, positive and supportive learning environment in which diversities are valued;
- 5.01(2)(e)(ii).—identify appropriately ambitiousrealistic and age-respectful expectations for personal and social behavior in various settings;
- 5.01(2)(e)(iii).—identify supports needed for safe and effective inclusion, access and participationintegration into various program placements;
- 5.01(2)(e)(iv).—design learning environments that encourage active participation in individual and group activities;
- 5.01(2)(e)(v).—modify-adapt, as appropriate, the learning environment to manage promote expected prosocial behaviors;
- 5.01(2)(e)(vi).—use performance data and information from all stakeholders-involved parties to make or suggest modifications-adaptations in learning environments;
- 5.01(2)(e)(vii).—establish and maintain rapport with individuals with and without exceptionalities;
- 5.01(2)(e)(viii).—teach developmentally appropriate, age-respectful self-advocacy;
- 5.01(2)(e)(ix).—create an environment that encourages developmentally appropriate, age-respectful self-advocacy and increased independence, characterized by appropriate student behavior, efficient use of time and disciplined student acquisition of knowledge, skills and application thereof through;
- 5.01(2)(e)(ix)(A) the provision of a safe, productive learning environment that is responsive to the physical, social, cognitive, academic, linguistic, cultural and functional needs of student learners;
- 5.01(2)(e)(ix)(B) evaluation to determine specific learner affective needs and to match student strengths with appropriate curriculum and instructional delivery strategies in an environment organized to encourage optimal learning
- 5.01(2)(3)(ix)(C) matching classroom management and organizational techniques to the needs of groups of students; and
- 5.01(2)(e)(ix)(D) effective communication and collaboration with families to link school services and supports to home that focus on addressing cultural, socio-economic and linguistic diversity issues and other life-affecting conditions spanning kindergarten through transition-related learning needs;

- 5.01(2)(e)(x) —use effective and varied behavior management strategies that are positively stated, developmentally appropriate, age-respectful and aligned with student need and that address the function of the behavior;
- 5.01(2)(e)(xi) —use the least intensive behavior management intervention strategy consistent with the needs of the individual with exceptionalities;
- 5.01(2)(e)(xii) —design and managing daily routines;
- 5.01(2)(e)(xiii) —organize, develop and sustain learning environments that support positive intra-cultural and intercultural experiences;
- 5.01(2)(e)(xiv) —mediate controversial intercultural issues among individuals with exceptionalities within the learning environment in ways that enhance any culture, group or person;
- 5.01(2)(e)(xv) —provide guidance, structure, direct-coaching and support the activities of para-educators, volunteers and tutors and others on the educational team related to instruction, intervention and direct services to ensure that each student's IEP is implemented effectively; and
- 5.01(2)(e)(xvi) —use universal precautions for health and safety.

5.01(3) **Curricular content knowledge:** Beginning special education professionals use knowledge of general and specialized curricula to individualize learning for individuals with exceptionalities. Beginning special education professionals understand the central concepts, structures of the discipline and tools of inquiry of the content areas they teach, and can organize this knowledge, integrate cross-disciplinary skills and develop meaningful learning progressions for individuals with exceptionalities by:

- 5.01(3)(a) — Beginning special education professionals understand and use using general and specialized content knowledge for teaching across curricular content areas to individualize learning for individuals with exceptionalities;

5.01(3)(b) identifying and prioritizing areas of the general curriculum and accommodations for individuals with exceptionalities;

5.01(3)(b) 5.01(3)(c) — Beginning special education professionals modify-providing accommodations and/or modifications to general and specialized curricula to make them accessible to individuals with exceptionalities; and

5.01(3)(d) integrating affective, social and life skills with academic curricula.

5.01(3)(e) 5.01(3)(e) — Beginning special education professionals are aware of the scope and sequences of general and special curricula and are knowledgeable of:

5.01(3)(e)(i) 5.01(3)(e)(i) theories and research that form the basis of curriculum development and instructional practice;

5.01(3)(e)(ii) scope and sequences of general and special curricula;

5.01(3)(e)(iii) 5.01(3)(e)(ii) — national, state and local curricula standards; and

5.01(3)(e)(iv) 5.01(3)(e)(iii) — technology for planning and managing the teaching and learning environment.

5.01(3)(d)5.01(3)(f) —Beginning special education professionals are knowledgeable about:

5.01(3)(f)(i) reading, writing and communicating instruction and are able to collaborate and consult with content-area teachers in developing students' knowledge and skills in reading and written and oral communication and demonstrate the skills to:

5.01(3)(d)(i) —identify and prioritize areas of the general curriculum and accommodations for individuals with exceptionalities; and

5.01(3)(d)(ii) —integrate affective, social and life skills with academic curricula.5.01(3)(f)(i)(A) plan and organize reading and writing instruction and interventions informed by a variety of ongoing student assessment and implement methods of intensifying interventions to address challenges in literacy;

5.01(3)(f)(i)(B) use knowledge of typical and atypical language and cognitive development to guide the choice of instructional strategies and interventions in meeting the learning needs of individual students;

5.01(3)(f)(i)(C) develop in students the phonological and linguistic skills related to reading including phonemic awareness, concepts of print, systematic explicit phonics and other word identification strategies to enhance vocabulary development and spelling instruction;

5.01(3)(f)(i)(D) develop reading comprehension skills in students, including comprehension strategies within a variety of genres, literary response and analysis, content area literacy and the promotion of independent reading;

5.01(3)(f)(i)(E) increase oral and written English language arts skills and proficiency of students, including the appropriate and correct use of vocabulary and standard English, punctuation, grammar, sentence structure and spelling, as well as an understanding of the relationships between reading, writing and communicating

5.01(3)(f)(i)(F) design instruction and interventions based on the unique strengths and needs of students with exceptionalities to assist them in their acquisition of reading, writing and communicating skills;

5.01(3)(f)(i)(G) apply a variety of effective evidence-based specialized instructional strategies and curricular approaches to the teaching of reading and writing skills; and

5.01(3)(f)(i)(H) match appropriate instructional strategies to student needs related to the acquisition of knowledge and skills in required content areas, such as reading, writing and communicating;

5.01(3)(f)(ii) mathematics and mathematics instruction and are able to collaborate and consult with content-area teachers in developing students' knowledge and skills in the use of number systems, number sense, geometry, measurement, statistics, probability, mathematical functions and the use of variables; and

5.01(3)(f)(iii) general academic content of and basic concepts related to civics, economics, foreign language, geography, history, science, music, visual arts and physical education in order to collaborate with the general classroom teacher to provide the adaptations necessary for students to access and learn the content area.

5.01(3)(g) Beginning special education professionals are able to:

5.01(3)(g)(i) incorporate effective evidence-based strategies and interventions into collaborative roles with other professionals as related to planning for instructional delivery;

5.01(3)(g)(ii) consult and form evaluation teams with other school professionals, families and students to support learners in gaining required access to content aligned with individuals needs outlined in the IEP so that they may achieve the Colorado Academic Standards; and

5.01(3)(g)(iii) ensure instruction is consistent with state academic standards, and school and district priorities and requirements.

5.01(4) **Assessment:** Beginning special education professionals are knowledgeable about basic terms used in assessment, the use of technology in data-driven assessment, use the multiple methods of assessment and data-sources used in making educational decisions, and the legal provisions and ethical principles regarding the assessment of individuals, and demonstrate skills to:-

5.01(4)(a) ~~Beginning special education professionals develop individualized assessment strategies, utilize a wide variety of progress monitoring tools and select and use technically sound non-biased formal and informal assessments that minimize bias.~~

5.01(4)(b) ~~Beginning special education professionals use knowledge of measurement principles and practices to interpret assessment results and guide educational decisions for individuals with exceptionalities:-~~

5.01(4)(c) ~~Beginning special education professionals in collaboration collaborate with colleagues and families to use multiple types of assessment information in making decisions about and/or adapting instruction for individuals with exceptionalities:-~~

5.01(4)(d) assess and evaluate the effects that of a wide variety of teaching strategies and interventions have on student performance through an examination of student performance and assessment data;

5.01(4)(e) use functional assessment data to design and implement positive behavioral and intervention support systems collaboration with educational team members;

5.01(4)(f) use assessment information in making eligibility, program and placement decisions for individuals with exceptionalities, including those for culturally and/or linguistically diverse backgrounds;

~~5.01(4)(d) 5.01(4)(g) Beginning special education professionals engage individuals with exceptionalities to work toward quality learning and performance and provide feedback to guide them provide assessment results to all interested parties and specific and timely verbal feedback to students to guide and improve their academic performance related to academic standards; and-~~

5.01(4)(h) prepare students for required state accountability assessments and for any other formal and informational informal assessments of academic achievement.

5.01(4)(e) ~~Beginning special education professionals are knowledgeable of:~~

~~5.01(4)(e)(i) basic terminology used in assessment;~~

5.01(4)(e)(ii) — legal provisions and ethical principles regarding assessment of individuals;

5.01(4)(e)(iii) — screening, pre-referral, referral and classification procedures;

5.01(4)(e)(iv) — use and limitations of assessment instruments; and

5.01(4)(e)(v) — national, state and local accommodations and modifications.

5.01(4)(f) Beginning special education professionals demonstrate the skills to:

5.01(4)(f)(i) — gather relevant background information;

5.01(4)(f)(ii) — administer nonbiased formal and informal assessments;

5.01(4)(f)(iii) — use technology to conduct assessments;

5.01(4)(f)(iv) — develop or modify individualized assessment strategies;

5.01(4)(f)(v) — interpret information from formal and informal assessments;

5.01(4)(f)(vi) — use assessment information in making eligibility, program and placement decisions for individuals with exceptionalities, including those for culturally and/or linguistically diverse backgrounds;

5.01(4)(f)(vii) — report assessment results to all stakeholders using effective communication skills;

5.01(4)(f)(viii) — evaluate instruction and monitor progress of individuals with exceptionalities; and

5.01(4)(f)(ix) — create and maintain records.

5.01(5) **Instructional planning and strategies:** Beginning special education professionals select, adapt and use a repertoire of evidence-based instructional strategies to advance learning of individuals with exceptionalities and demonstrate skills to:

5.01(5)(a) — Beginning special education professionals consider an individual's abilities, interests, learning environments, and cultural and linguistic factors in the selection, development and adaptation of instruction and learning experiences for individuals with exceptionalities;

5.01(5)(b) — Beginning special education professionals use technologies to support instructional assessment, planning and delivery for individuals with exceptionalities;

5.01(5)(c) incorporate validated evidence-based practices for specific characteristics of learners and settings to design short- and long-range instruction and intervention plans aligned to the Colorado Academic Standards;

5.01(5)(c) 5.01(5)(d) — Beginning special education professionals are familiar with support students with exceptionalities via augmentative and alternative communication systems and a variety of current and assistive technologies for receptive and expressive communication and to meet students' instructional needs; to support the communication and learning of individuals with exceptionalities;

- ~~5.01(5)(d)~~ ~~5.01(5)(e)~~ — ~~Beginning special education professionals~~ use strategies to enhance language development and communication skills of individuals with exceptionalities;
- ~~5.01(5)(e)~~ ~~5.01(5)(f)~~ — ~~Beginning special education professionals~~ develop and implement a variety of education and transition plans for individuals with exceptionalities across a wide range of settings and different learning experiences in collaboration with individuals, families and teams;
- ~~5.06(5)(f)~~ ~~5.01(5)(g)~~ — ~~Beginning special education professionals~~ teach to mastery and promote generalization of learning cross-disciplinary knowledge and skills such as critical-thinking and problem-solving to individuals with exceptionalities.
- ~~5.06(5)(g)~~ ~~5.01(5)(h)~~ — ~~Beginning special education professionals~~ teach cross-disciplinary knowledge and skills such as critical-thinking and problem-solving to individuals with exceptionalities support students in their acquisition of technology skills according to need(s), levels of learning and requirements for assistive technology;
- ~~5.01(5)(h)~~ — ~~Beginning special education professionals~~ are knowledgeable of:
- ~~5.01(5)(h)(i)~~ — ~~roles and responsibilities of the para-educator related to instruction, intervention and direct service;~~
 - ~~5.01(5)(h)(ii)~~ — ~~evidence-based practices validated for specific characteristics of learners and settings; and~~
 - ~~5.01(5)(h)(iii)~~ — ~~augmentative and assistive communication strategies.~~
- ~~5.01(5)(i)~~ — ~~Beginning special education professionals~~ demonstrate the skills to:
- ~~5.01(5)(i)(i)~~ — ~~develop and implement comprehensive, longitudinal individualized programs in collaboration with the educational team; team members;~~
- ~~5.01(5)(i)(ii)~~ ~~5.01(5)(i)(i)~~ — ~~involve involving the individual student~~ and family in setting instructional goals and monitoring progress;
- ~~5.01(5)(i)(iii)~~ — ~~use functional assessments to develop intervention plans;~~
- ~~5.01(5)(i)(iv)~~ ~~5.01(5)(i)(ii)~~ — ~~use using~~ task analysis;
- ~~5.01(5)(i)(v)~~ ~~5.01(5)(i)(iii)~~ — ~~sequence sequencing~~, implementing and ~~evaluate evaluating~~ individualized learning objectives;
- ~~5.01(5)(i)(vi)~~ ~~5.01(5)(i)(iv)~~ — ~~developing~~ and selecting instructional content, resources and strategies that respond to cultural, linguistic and gender differences; ~~and~~
- ~~5.01(5)(i)(vii)~~ ~~5.01(5)(i)(v)~~ — ~~incorporate incorporating~~ and implementing instructional and assistive technology into the educational program;
- ~~5.06(5)(i)(viii)~~ ~~5.01(5)(i)(vi)~~ ~~prepare preparing~~ lesson plans ~~and organizing materials to implement them;~~
- ~~5.06(5)(i)(ix)~~ — ~~prepare and organize materials to implement daily lesson plans.~~
- ~~5.06(5)(i)(x)~~ ~~5.01(5)(i)(vii)~~ — ~~use using~~ instructional time effectively ~~and making responsive adjustments to instruction based on continual observations;~~

~~5.06(5)(i)(xi) — make responsive adjustments to instruction based on continual observations;~~

~~5.01(5)(i)(xii) 5.01(5)(i)(viii) — using procedures to increase the individual's self-awareness, self-management, self-control, self-reliance and self-esteem to prepare individuals to exhibit self-enhancing behavior in response to societal attitudes and actions; and~~

~~5.01(5)(i)(xiii) 5.01(5)(i)(ix) — use implementing strategies to facilitate integration into various settings; including strategies that:~~

~~5.01(5)(i)(xiv) — 5.01(5)(i)(ix)(A) teach individuals to use self-assessment, problem-solving solve and use other cognitive strategies to meet their needs;~~

~~5.01(5)(i)(xv) — select, adapt and use instructional strategies and materials according to characteristics of the individual with exceptionalities;~~

~~5.01(5)(i)(xvi) 5.01(5)(i)(ix)(B) use strategies to facilitate maintenance and generalization of skills across learning environments;~~

~~5.01(5)(i)(xvii) — use procedures to increase the individual's self-awareness, self-management, self-control, self-reliance and self-esteem;~~

~~5.01(5)(i)(xviii) — 5.01(5)(i)(ix)(C) use strategies that promote successful transitions for individuals with exceptionalities; and~~

~~5.01(5)(i)(xix) — use strategies to support and enhance communication skills of individuals with exceptionalities;~~

~~5.01(5)(i)(xx) 5.01(5)(i)(ix)(D) use communication strategies and resources to facilitate understanding of subject matter for individuals with exceptionalities whose primary language is not the dominant language; and~~

~~5.01(5)(i)(xxi) — modify instructional practices in response to ongoing assessment data.~~

5.01(6) **Professional learning and ethical practice:** Beginning special education professionals conduct professional activities in compliance with applicable laws and policies, use foundational knowledge of the field and their professional ethical principles and practice standards to inform special education practice, are committed to engage in lifelong learning, remaining current in research-validated and evidence-based practices and to advancing the profession, and demonstrate skills to:

5.01(6)(a) — Beginning special education professionals hold high standards of competence and integrity, exercise sound judgment and demonstrate familiarity with ethical principles in the special education field, practice within the CEC code of ethics, high leverage practices and other standards of the profession; use professional ethical principles and professional practice standards to guide their practice.

5.01(6)(b) — act ethically in advocacy for appropriate and unbiased identification, assessment, instruction and service delivery; Beginning special education professionals understand how foundational knowledge and current issues influence professional practice.

- 5.01(6)(c) ~~practice within one's skill limitations and obtain assistance as needed; Beginning special education professionals understand that diversity is a part of families, cultures and schools, and that complex human issues can interact with the delivery of special education services.~~
- 5.01(6)(d) ~~make ethical decisions with regard to unbiased identification, assessment, instructional and service delivery for students in special education; Beginning special education professionals understand the significance of lifelong learning and participate in professional activities and learning communities;.~~
- 5.01(6)(e) ~~conduct self-evaluation of instruction and reflect on one's practice to improve instruction and guide professional growth; Beginning special education professionals advance the profession by engaging in activities such as advocacy and mentoring.~~
- 5.01(6)(f) ~~Beginning special education professionals provide guidance and direction to para-educators, tutors and volunteers.~~
- 5.01(6)(f) promote the highest quality-of-life potential of individuals with exceptionalities; and
- 5.01(6)(g) be sensitive to the culture, language, religion, gender, disability, socio-economic status and sexual orientation of individuals.
- ~~5.01(6)(g) 5.01(6)(h)~~ ~~Beginning special education professionals are knowledgeable of:~~
understand:
- ~~5.01(6)(g)(i) 5.01(6)(h)(i)~~ ~~models, theories, philosophies and research methods that form the basis for special education practice;~~
- ~~5.01(6)(g)(ii) 5.01(6)(h)(ii)~~ ~~laws, policies and ethical principles regarding functional and positive behavior management planning and implementation addressing function of behavior and how to provide unbiased supports;~~
- ~~5.01(6)(g)(iii) 5.01(6)(h)(iii)~~ ~~the relationship of special education to the organization and the function of educational agencies;~~
- ~~5.01(6)(g)(iv) 5.01(6)(h)(iv)~~ ~~the rights and responsibilities of individuals with exceptionalities, parents, teachers, other professionals and schools related to exceptionalities;~~
- 5.01(6)(h)(v) issues, assurances and due -process rights related to assessments, eligibility and placement within a continuum of services;
- ~~5.01(6)(g)(v) 5.01(6)(h)(vi)~~ ~~issues in definition and identification of individuals with exceptionalities, including those from dual language and culturally and linguistically diverse backgrounds; including:~~
- 5.01(6)(h)(vi)(A) how diversity is part of families, cultures and schools and that complex human issues can interact with the delivery of special education services;
- 5.01(6)(h)(vi)(B) historical points of view and contribution of culturally diverse groups; and
- 5.01(6)(h)(vi)(C) the impact of the dominant culture on shaping school culture and the importance of providing culturally responsive pedagogy;

~~5.01(6)(g)(vi)~~5.01(6)(h)(vii)—issues, assurances and due-process rights related to assessments, eligibility and placement within a continuum of services;

~~5.01(6)(g)(vii)~~5.01(6)(h)(viii)—family systems and the role of families in the educational process;

~~5.01(6)(g)(viii)~~—historical points of view and contribution of culturally diverse groups;

~~5.01(6)(g)(ix)~~—impact of the dominant culture on shaping schools and the individuals who study and work in them;

~~5.01(6)(g)(x)~~—potential impact of differences in values, languages and customs that can exist between the home and school;

~~5.01(6)(g)(xi)~~5.01(6)(h)(ix)—personal cultural biases and differences that affect one's teaching, behaviors, evaluation and collaboration; and

~~5.01(6)(g)(xii)~~5.01(6)(h)(x)—the importance of the teacher serving as an intentional model of inclusion for individuals with exceptionalities;

5.01(6)(i) The beginning special education professional is knowledgeable about the relationship of education to democracy, the school's role in teaching and perpetuating a democratic system of government; educational governance; careers in teaching; the relationship(s) between the various government entities that create laws, rules, regulations and policies and special education practices, and is able to:

5.01(6)(i)(i) model and articulate democratic ideals to students and other stakeholders, by:

5.01(6)(i)(i)(A) teaching about productive citizenship; and

5.01(6)(i)(i)(B) teaching and perpetuating the principles of a democratic republic;

5.01(6)(i)(ii) model for and develop in students positive and accepted behaviors to accepted standards and respect for the rights of others as necessary for successful personal, family and community involvement and well-being;

5.01(6)(i)(iii) demonstrate respect for and effectively address in planning the influences that affect educational practice, including:

5.01(6)(i)(iii)(A) federal and state constitutional provisions;

5.01(6)(i)(iii)(B) federal and state executive, legislative and legal policies;

5.01(6)(i)(iii)(C) the roles of elected officials in policy-making;

5.01(6)(i)(iii)(D) local boards of education, school district and school administration policies and those of boards of cooperative services;

5.01(6)(i)(iii)(E) the influence of nontraditional and nonpublic schools, including charter, private and home schools, and

5.01(6)(i)(iii)(F) public sector input from business, advocacy groups and the public.

5.01(6)(i)(iv) promote teaching as a worthy career and describe the wide variety of career paths in education; and

5.01(6)(i)(v) participate in professional development options that can improve performance and provide professional development or other learning opportunities to colleagues in school buildings related to best practices in special education.

~~5.01(6)(g)(xiii)—continuum of lifelong professional development; and~~

~~5.01(6)(g)(xiv)—methods to remain current regarding research-validated practice.~~

~~5.01(6)(h)——Beginning special education professionals demonstrate the skills to:~~

~~5.01(6)(h)(i)——practice within the CEC code of ethics and other standards of the profession;~~

~~5.01(6)(h)(ii)——uphold high standards of competence and integrity and exercise sound judgment in the practice of the profession;~~

~~5.01(6)(h)(iii)——act ethically in advocating for appropriate services;~~

~~5.01(6)(h)(iv)——conduct professional activities in compliance with applicable laws and policies;~~

~~5.01(6)(h)(v)——demonstrate commitment to developing the highest education and quality of life potential of individuals with exceptionalities;~~

~~5.01(6)(h)(vi)——demonstrate sensitivity for the culture, language, religion, gender, disability, socio-economic status and sexual orientation of individuals;~~

~~5.01(6)(h)(vii)——practice within one's skill limits and obtain assistance as needed;~~

~~5.01(6)(h)(viii)——use verbal, nonverbal and written language effectively;~~

~~5.01(6)(h)(ix)——conduct self-evaluation of instruction;~~

~~5.01(6)(h)(x)——access information on exceptionalities;~~

~~5.01(6)(h)(xi)——reflect on one's practice to improve instruction and guide professional growth;~~

~~5.01(6)(h)(xii)——engage in professional activities that benefit individuals with exceptionalities, their families and one's colleagues;~~

~~5.01(6)(h)(xiii)——demonstrate commitment to engage in evidence-based practices; and~~

~~5.01(6)(h)(xiv)——articulate personal philosophy of special education.~~

5.01(7) Collaboration and cultural responsiveness: Beginning special education professionals understand the theory and elements of effective collaboration and serve as a collaborative resource to collaborate with families, other educators, related service providers, individuals with exceptionalities and personnel from community agencies in culturally responsive ways to address the needs of individuals with exceptionalities across a range of learning experiences and demonstrate knowledge of:-

- 5.01(7)(a) ~~Beginning special education professionals use the theory and elements of effective collaboration.~~
- 5.01(7)(b) ~~Beginning special education professionals serve as a collaborative resource to colleagues.~~
- 5.01(7)(c) ~~Beginning special education professionals use collaboration to promote~~ promoting the well-being of individuals with exceptionalities across a wide range of settings and collaborators.
- 5.01(7)(d) ~~5.01(7)(b)~~ Beginning special education professionals are knowledgeable of:
- 5.01(7)(d)(i) models and strategies of consultation and collaboration;
- 5.01(7)(d)(ii) ~~5.01(7)(c)~~ the roles of individuals with exceptionalities, families and school and community personnel in planning of an ~~individualized program~~ IEP;
- 5.01(7)(d)(iii) ~~5.01(7)(d)~~ concerns of families of individuals with exceptionalities and strategies to help address these concerns; and
- 5.01(7)(d)(iv) ~~5.01(7)(e)~~ culturally responsive factors that promote effective communication and collaboration with individuals with exceptionalities, families, school personnel and community members.
- 5.01(7)(e) ~~5.01(7)(f)~~ Beginning special education professionals demonstrate the skills to:
- 5.01(7)(e)(i) ~~5.01(7)(f)(i)~~ maintain confidential communication about individuals with exceptionalities;
- 5.01(7)(e)(ii) ~~5.01(7)(f)(ii)~~ collaborate with families and others in assessment of individuals with exceptionalities;
- 5.01(7)(e)(iii) ~~5.01(7)(f)(iii)~~ foster respectful and beneficial relationships between families and professionals;
- 5.01(7)(e)(iv) ~~5.01(7)(f)(iv)~~ assist individuals with exceptionalities and their families in becoming active participants in the educational team;
- 5.01(7)(e)(v) ~~5.01(7)(f)(v)~~ plan and conduct collaborative conferences with individuals with exceptionalities and their families;
- 5.01(7)(e)(vi) ~~5.01(7)(f)(vi)~~ collaborate with school personnel and community members in integrating individuals with exceptionalities into various settings;
- 5.01(7)(e)(vii) ~~5.01(7)(f)(vii)~~ use group ~~problem~~ problem-solving skills to develop, implement and evaluate collaborative activities;
- 5.01(7)(e)(viii) ~~5.01(7)(f)(viii)~~ model techniques and ~~provide professional development and coaching to~~ others in the use of instructional methods and accommodations;
- 5.01(7)(e)(ix) ~~5.01(7)(f)(ix)~~ communicate with school personnel about the characteristics and needs of individuals with exceptionalities;
- 5.01(7)(e)(x) ~~5.01(7)(f)(x)~~ communicate effectively with families of individuals with exceptionalities from diverse backgrounds; ~~and~~

5.01(7)(e)(xi) 5.01(7)(f)(xi). —observe, evaluate and provide feedback to para-educators; assist content-area teachers in adapting curriculum, instruction and strategies utilizing evidence-based practices and technology to support students with exceptionalities in meeting Colorado Academic Standards and extended evidence outcomes;

5.01(7)(f)(xii) assist students in education, behavior and transition services or transitions with family, educators, other professional and relevant community representatives; and

5.01(7)(f)(xiii) strategize with other professionals when a student's medical condition or medication must be considered in terms of its effect on a student's learning or behavior.

5.02 Early Childhood Special Education (Ages Birth-8)

To be endorsed in early childhood special education, for ages birth-8, an applicant must hold a bachelor's or higher degree from a four-year accepted institution of higher education; have completed an approved program in early childhood special education, that includes student teaching and practicum; have demonstrated the foundational knowledge and skills necessary for working with young children found in 4.01 of these rules; and have demonstrated the additional competencies specified below:

These early childhood special education standards are targeted, intensive and specialized for educators working with children with disabilities and exceptional needs.

5.02(1) Learner development and individual learning differences (builds upon rule 4.01(1)):
Beginning early childhood special education professionals understand how exceptionalities may interact with development and learning and use this knowledge to provide meaningful and challenging learning experiences for individuals with exceptionalities.

5.02(1)(a) Beginning early childhood special education professionals demonstrate knowledge of:

5.02(1)(a)(i) the impact that different theories and philosophies of early learning and development have on assessment, curriculum, intervention and instruction decisions;

5.02(1)(a)(ii) biological and environmental factors that may support or constrain children's early development and learning as they plan and implement early intervention and instruction;

5.02(1)(a)(iii) characteristics, etiologies and individual differences within and across the range of abilities, including development delays and disabilities, and their potential impact on children's early development and learning; and

5.02(1)(a)(iv) normative sequences of early development, individual differences and families' social and cultural linguistic diversity to support each child's development and learning across contexts.

5.02 (1)(b) Beginning early childhood special education professionals demonstrate the skills to:

5.02(1)(b)(i) develop and match learning experiences and strategies to characteristics of infants and young children;

5.02(1)(b)(ii) identify systematic, responsive and intentional evidence-based practices and use these practices with fidelity to support young children's learning and development across all developmental and content domains; and

5.02(1)(b)(iii) establish communication systems for young children that support self-advocacy, including the use of assistive technology for young children who are deaf and/or hard of hearing.

5.02(2) Learning environments and instructional planning and strategies (builds upon rule 4.01(4) and 4.01(8)): Beginning early childhood special education professionals create safe, inclusive, culturally responsive learning environments and select, adapt and use a repertoire of evidence-based instructional strategies to advance the learning of individuals with exceptionalities..

5.02(2)(a) Beginning early childhood special education professionals demonstrate the skills to:

5.02(2)(a)(i) engage in ongoing planning and use flexible and embedded instructional and environmental arrangements and appropriate materials to support the use of interactions, interventions and instruction addressing the development and academic content domains, which are adapted to meet the needs of each child and their family;

5.02(2)(a)(ii) use responsive interactions, interventions and instruction with sufficient intensity and types of support across activities, routines and environments to promote child learning and development and facilitate access, participation and engagement in natural environments and inclusive settings;

5.02(2)(a)(iii) plan for, adapt and improve approaches to interactions, interventions and instruction based on multiple sources of data across a range of natural environments and inclusive settings;

5.02(2)(a)(iv) use technologies to support instructional assessment, planning and delivery for individuals with exceptionalities;

5.02(2)(a)(v) identify and create multiple opportunities for young children to develop and learn play skills and engage in meaningful play experiences independently and across contexts;

5.02(2)(a)(vi) promote young children's social and emotional competence and communication and proactively plan and implement function-based interventions to prevent and address challenging behaviors;

5.02(2)(a)(iv) structure,; direct and support the activities of para-educators, volunteers and tutors;

5.02(2)(a)(v) intervene safely and appropriately with individuals with exceptionalities in a crisis; and

5.02(2)(a)(vi) use universal precautions.

5.02(3) Curricular content knowledge (builds upon rule 4.01(8)): Beginning early childhood special education professionals use knowledge of general and specialized curricula to individualize learning for individuals with exceptionalities.

5.09(3)(a) Beginning early childhood special education professionals are knowledgeable of early childhood curriculum frameworks, developmental and academic content knowledge and related pedagogy to plan and ensure equitable access to universally designed, developmentally appropriate and challenging learning experiences in natural and inclusive environments.

5.02(3)(b) Beginning early childhood special education professionals demonstrate the skills to:

5.02(3)(b)(i) collaborate with families and other professionals to identify an evidence-based curriculum addressing developmental and content domains to design and facilitate meaningful and culturally responsive learning experiences that support the unique abilities and needs of all children and families; and

5.02(3)(b)(ii) engage in ongoing reflective practice and access evidence-based information to improve their own practices.

5.02(4) Assessment (builds upon rule 4.01(2)): Beginning early childhood special education professionals use multiple methods of assessment and data-sources in making educational decisions.

5.02(4)(a) Beginning early childhood special education professionals are knowledgeable of the:

5.02(4)(a)(i) purposes of formal and informal assessment, including ethical and legal considerations, and use this information to choose developmentally, culturally and linguistically appropriate, valid, reliable tools and methods that are responsive to characteristics of the young child, family and program;

5.02(4)(a)(ii) process for developing and administering informal assessments and/or selecting and using valid, reliable formal assessments that use evidence-based practices, including technology, in partnership with families and other professionals;

5.02(4)(a)(iii) process for exiting children from special education when appropriate; and

5.02(4)(a)(iv) the data collection for federal reporting requirements (entries and exits to early childhood special education) and the need for collaboration with general education early childhood educators to support this data collection.

5.02(4)(b) Beginning early childhood special education professionals demonstrate the skills to:

5.02(4)(b)(i) analyze, interpret, document and share assessment information using a strength-based approach with families and other professionals; and

5.02(4)(b)(ii) collaborate with families and other team members to use data to determine eligibility, develop child and family-based outcomes and goals, plan for interventions and instruction, and monitor progress to determine efficacy of programming.

5.02(5) Professional learning and ethical practice (builds upon rule 4.01(6)): Beginning early childhood special education professionals use foundational knowledge of the field and their professional ethical principles and practice standards to inform early childhood special education practice, to engage in lifelong learning and to advance the profession.

5.02(5)(a) Beginning early childhood special education professionals are knowledgeable of trends and issues in early childhood education, early childhood special education and early intervention and practice in accordance with ethical and legal policies and procedures.

5.02(5)(b) Beginning early childhood special education professionals demonstrate the skills to:

5.02(5)(b)(i) advocate for improved outcomes for young children, families and the profession, including the promotion and use of evidence-based practices and decision-making;

5.02(5)(b)(ii) recognize signs of emotional distress, neglect and abuse, and follow reporting procedures;

5.02(5)(b)(iii) implement the level of support needed by the family to achieve the desired outcomes for the child;

5.02(5)(b)(iv) fully understand procedural safeguards and ensure families understand them and are part of the decision-making;

5.02(5)(b)(v) implement family services consistent with due process safeguards;

5.02(5)(b)(vi) serve as a model for individuals with exceptionalities;

5.02(5)(b)(vii) conduct professional activities in compliance with applicable laws and policies; and

5.02(5)(b)(viii) engage with the early intervention/early childhood special education profession by participating in local, regional, national and/or international activities and organizations

5.02(6) Collaboration (builds upon rule 4.01(3)): Beginning early childhood special education professionals collaborate with families, other educators, related service providers, individuals with exceptionalities and personnel from community agencies in culturally responsive ways to address the needs of individuals with exceptionalities across a range of learning experiences.

5.02(6)(a) Beginning early childhood special education professionals demonstrate the skills to:

5.02(6)(a)(i) apply teaming models, skills and processes and appropriate uses of technology when collaborating and communicating with families, professionals with varying skills, expertise and roles across multiple disciplines, community partners and agencies;

5.02(6)(a)(ii) use a variety of evidence-based, collaborative strategies when working with adults that are culturally and linguistically responsive and appropriate to the task, the environment and service delivery approach;

5.02(6)(a)(iii) partner with families and other professionals to develop individualized plans and support the various transitions that occur for the child and their family throughout the birth-8 age span;

5.02(6)(a)(iv) apply family-centered practices, family systems theory and knowledge of the changing needs and priorities in families' lives to develop trusting, respectful,

affirming and culturally responsive partnerships with all families to allow for the mutual exchange of knowledge and information;

5.02(6)(b)(v) engage in reciprocal partnership with families and other professionals to facilitate responsive adult-child interactions, interventions and instruction in support of child learning and development;

5.02(6)(b)(vi) engage families in identifying their strengths, priorities and concerns; and

5.02(6)(b)(vii) promote families' competence and confidence during assessment, individualized planning, intervention and transition processes to support their goals for their family and young child's development and learning.

5.02 Special Education Specialist (Ages 5-21)

To be endorsed as a special education specialist, an applicant must hold a Colorado initial or professional teacher license as a special education generalist or demonstrate through multiple performance measures the competencies required for a special education generalist endorsement; hold an earned master's or higher degree in special education from an accepted institution of higher education; have completed an approved program for the preparation of special education specialists, including prescribed field experience requirements; ensure that instruction is consistent with Colorado Academic Standards, Colorado accreditation requirements and school district and school priorities and objectives; and have demonstrated the competencies specified below:

5.02(1) — The special education specialist is knowledgeable about professional leadership; the critical roles and responsibilities of effective ethical leadership; best instructional practices; how to effectively address outcomes for all learners, including those with disabilities; and is able to:

5.02(1)(a) — use the Colorado standards to develop individualized educational plans (IEPs) for students with diverse educational needs.

5.02(1)(b) — recognize limitations of professional expertise and collaborate and consult with appropriate support services to meet the needs of students and their families.

5.02(1)(c) — effectively coach and mentor other education professionals to ensure that individuals with disabilities have access to and appropriately participate in the general education curriculum and instructional programs.

5.02(1)(d) — initiate effective collaborative relationships with other community agencies and programs, where appropriate, to gain access to resources and to promote improved quality of education for students with disabilities.

5.02(1)(e) — effectively articulate and model to other professionals the legal and ethical aspects of the special education profession.

5.02(1)(f) — demonstrate effective consultation and collaboration skills with students, families and professional colleagues in administrative, instructional and intervention settings.

5.02(1)(g) — provide leadership in transitioning students within and across systems so that students have the skills, knowledge and ability they need to achieve desired outcomes.

5.02(1)(h) — develop and effectively use accountability systems to document the academic and related success of students with disabilities, and to improve instruction and the provision of services.

5.02(1)(i) — assume proactive roles in management, governance and leadership within relevant professional organizations and educational systems.

5.02(1)(j) — develop and implement professional development programs and constructive evaluation procedures designed to improve instructional content and practices.

5.02(1)(k) — mentor colleagues using a variety of adult learning methods including, but not limited to, coaching and demonstrating effective instructional delivery.

5.02(1)(l) — engage in ongoing and sustained professional development.

5.02(2) — The special education specialist is knowledgeable about the foundations of special education and the legal framework, historical precedents, curricular foundations and cultural and socio-economic factors affecting students with disabilities, and is able to:

5.02(2)(a) — develop, implement and supervise individualized education planning.

5.02(2)(b) — consult and collaborate effectively, with educators, families and community members to facilitate learning.

5.02(2)(c) — modify and create successful learning environments for all children and youth, and incorporate knowledge of effective and proven past practices, cultural influences and socio-economic factors.

5.02(2)(d) — evaluate and select effective appropriate curriculum-related materials to improve student learning.

5.02(3) — The special education specialist is knowledgeable about learning needs and effective instructional approaches for learners with special needs and is able to:

5.02(3)(a) — assess the influence of economic, cultural, sociological and linguistic factors on learning and address this in planning for student learning.

5.02(3)(b) — use a variety of continuous monitoring strategies to measure learning, adjust instruction and enhance student progress towards standards' acquisition in literacy and numeracy.

5.02(3)(c) — effectively demonstrate, effectively implement and evaluate a wide variety of appropriate instructional strategies.

5.02(3)(d) — develop and effectively implement instructional programs for acquisition, maintenance, generalization and application of knowledge and skills.

5.02(3)(e) — effectively teach students methods of attaining educational goals, and assist them in developing the means to act independently.

5.02(3)(f) — design, communicate and implement effective accommodations for use in a variety of environments.

5.02(3)(g) — effectively teach the assessment, use and implementation of assistive technology to students and colleagues.

5.02(4) — The special education specialist is knowledgeable about cognition, communication and language; proven documented theories of cognition, communication and language development; curriculum planning; instruction and evaluation and is able to:

5.02(4)(a) — assess and evaluate the communicative and cognitive skills of students with disabilities in coordination with other related profession specialists.

5.02(4)(b) — assist in the design of curriculum and instruction based on cognitive, communicative and language assessment results.

5.02(4)(c) — incorporate principles of speech and language acquisition into the teaching of research-based literacy skills including the graphophonemic, syntactic, semantic and pragmatic aspects of language development and communicative competence.

5.02(4)(d) — use assessment strategies to identify cognitive, language and communication needs affected by cultural, language diversity, neurological and psycholinguistic factors and address these needs in planning.

5.02(5) — The special education specialist is knowledgeable about social and emotional needs including the behavioral, social and emotional needs inherent in the development of learners with disabilities, and is able to:

5.02(5)(a) — assess the impact of psychological, sociological, cultural and ecological factors on the development and implementation of educational interventions to positively affect the behavior of students with special needs.

5.02(5)(b) — develop, implement and coordinate functional behavioral assessments.

5.02(5)(c) — choose, use and interpret behavior and social assessment tools.

5.02(5)(d) — develop, implement, supervise, evaluate and modify individual behavior support plans.

5.02(5)(e) — apply effective educational practices designed to improve the acquisition of social skills.

5.02(5)(f) — apply fair, consistent and effective systemic management strategies to prevent problem behavior.

5.02(5)(g) — select, apply and monitor educational interventions to safely, effectively manage students in crisis.

5.02(5)(h) — assess and monitor the impact of psychopharmacological interventions on student learning and behavior.

5.02(5)(i) — apply information about mental illness to the development, evaluation and implementation of educational interventions.

5.02(6) — The special education specialist is knowledgeable about specialized educational needs and the unique characteristics of learners with significant health, physical, sensory and communication concerns across learning environments, and is able to:

5.02(6)(a) — assess, develop and implement appropriate and effective accommodations for learners with health, physical and sensory needs.

5.02(6)(b) — analyze, select and implement effective assistive technologies to facilitate students' learning communication.

5.02(6)(c) — demonstrate and implement strategies that enhance mobility, appropriate positioning and environmental access for learners with significant physical and health needs.

5.02(6)(d) — collaborate with appropriate health professionals to assist in the development and implementation of health care plans.

5.02(6)(e) — analyze, select and implement strategies that effectively support access to the general education curriculum for learners with health, physical and sensory needs.

5.02(7) — The special education specialist is knowledgeable about practice-based inquiry, is a reflective practitioner and is able to:

5.02(7)(a) — engage in professional discourse about effective and proven research-based practices.

5.02(7)(b) — use qualitative and quantitative forms of inquiry to collect, analyze and synthesize data to improve practice.

5.02(7)(c) — collaborate with colleagues and parents to study, analyze and respond to data that positively affect practices and policies for whole school improvement.

5.02(7)(d) — utilize proven and effective research to guide practice and create appropriate and effective learning experiences for students.

5.02(7)(e) — select and use appropriate inquiry tools.

5.02(7)(f) — design and implement documented and effective research models that constructively challenge hypotheses about teaching and learning.

5.02(7)(g) — disseminate documented, proven, effective practice(s).

5.02(7)(h) — gain access via technology and other means to a range of databases to acquire relevant information and support practice.

5.02(7)(i) — adhere to ethical principles for conducting research with human subjects.

5.02(7)(j) — involve students, parents and colleagues in the design, implementation and analysis of effective classroom practice.

5.02(7)(k) — evaluate the effects of choices and actions on student learning and modify learning and related plans accordingly.

5.03 Special Education Specialist: Visually Impaired (Ages Birth-21)

To be endorsed as a special education specialist: visually impaired, an applicant must hold an earned master's or higher degree in special education visual impairment or its equivalent (as determined by the Department) from an accepted institution of higher education; have completed an approved program for the preparation of special education specialists: visually impaired including prescribed field experience requirements; and have demonstrated the competencies specified below:

5.03(1) The special education specialist: visually impaired is knowledgeable about the foundations of special education including, but not limited to, the legal framework, historical precedents,

auricular foundation and cultural and socio-economic factors affecting students with visual impairment(s) and other disabilities, and is able to:

5.03(1)(a) articulate to a variety of audiences the models, theories, historical foundation and philosophies that provide the bases for special education practice related to learners who are visually impaired.

5.03(1)(b) articulate to a variety of audiences variations in beliefs, traditions and values across cultures and their effect on attitudes toward and expectations for students with visual impairment(s).

5.03(1)(c) identify and gain access to federal entitlements that provide specialized equipment and materials for students with visual impairment(s).

5.03(1)(d) articulate and explain current educational definitions, identification criteria, labeling issues, and incidence and prevalence figures for students with visual impairment(s) and deaf blindness.

5.03(2) The special education specialist: visually impaired is knowledgeable about the characteristics of learners, human development and the implications of blindness, visual impairment(s) and deaf blindness upon developmental and academic skills acquisition, and is able to articulate and incorporate into the planning for students relevant information about:

5.03(2)(a) the structure, function and normal development of the human visual system.

5.03(2)(b) basic terminology, manifestations and educational implications of diseases and disorders of the human visual system.

5.03(2)(c) effects of medication(s) on the function(s) of the visual system.

5.03(2)(d) the development of other senses when vision is impaired.

5.03(2)(e) the effects of visual impairment(s) on early development of motor skills, cognition, social/emotional interaction, self-help, communication and early literacy.

5.03(2)(f) similarities and differences between the cognitive, physical, cultural, social, emotional, sensory and literacy needs of students with and without visual impairment(s).

5.03(2)(g) differential characteristics of students with visual impairments including levels of severity and the impact of concomitant additional disabilities.

5.03(2)(h) the effects of visual impairment(s) on the family and the reciprocal impact on the individual's self-esteem.

5.03(2)(i) psychosocial aspects of visual impairment(s).

5.03(2)(j) the impact of visual impairment(s) and deaf blindness on formal and incidental learning experiences.

5.03(2)(k) psychosocial aspects of visual impairment(s).

5.03(3) The special education specialist: visually impaired is knowledgeable about visual disorders and is able to:

- 5.03(3)(a) explain the characteristics of visual disorders to families and to other educational service providers.
 - 5.03(3)(b) describe the effects of visual impairment(s) – with and without additional disabilities – on development, learning and literacy.
 - 5.03(3)(c) provide information regarding the cognitive, communication, physical, medical, cultural, social, emotional, sensory and literacy needs of students with visual impairment(s) to their families and to educational and related service providers.
 - 5.03(3)(d) recommend adaptations within instructional environments to identify and accommodate individual sensory need(s).
- 5.03(4) The special education specialist: visually impaired is knowledgeable about assessment and evaluation and is able to:
- 5.03(4)(a) complete accurate assessments of students' developmental and academic performance, apply the information in planning for students and articulate to a variety of audiences regarding:
 - 5.03(4)(a)(i) specialized terminology used in the medical diagnoses and educational assessment(s) of students with visual impairment(s);
 - 5.03(4)(a)(ii) specific assessments that measure functional vision and learning modalities;
 - 5.03(4)(a)(iii) ethical considerations, legal provisions, regulations and guidelines related to the valid and relevant assessment of students with visual impairment(s);
 - 5.03(4)(a)(iv) specialized policies and procedures for screening, pre-referral, referral, classification and placement of students with visual impairment(s);
 - 5.03(4)(a)(v) alternative assessment tools and techniques for students with visual impairment(s) including, but not limited to, state- or district-level alternate assessment practices;
 - 5.03(4)(a)(vi) appropriate interpretation and application of assessment scores for students with visual impairment(s) and deaf blindness; and
 - 5.03(4)(a)(vii) the relationship(s) between assessment, individualized family service plan (IFSP) and individualized education plan (IEP) development, and placements, as each affects the educational services provided to students with visual impairment(s).
- 5.03(5) The special education specialist: visually impaired is knowledgeable about and able to evaluate the validity of individual tests for use with students with visual impairment(s) and is able to:
- 5.03(5)(a) use disability-specific assessment instruments.
 - 5.03(5)(b) adapt and implement a variety of assessment procedures in evaluating students with visual impairments and deaf blindness.
 - 5.03(5)(c) interpret eye reports and other information related to the visual impairment(s) including, but not limited to, low-vision evaluation reports to students with visual impairment(s), their families and to other educational and related service providers.

- 5.03(5)(d) utilize assessment and performance data to develop specific recommendations for modification(s) of and accommodations for the student's learning environment(s) and educational materials.
- 5.03(5)(e) conduct, interpret and apply the results of formal and informal assessment(s) of functional vision and learning modalities.
- 5.03(5)(f) create and maintain disability-related records for students with visual impairment(s).
- 5.03(5)(g) gather background information and family history relevant to the individual student's visual status and instructional needs.
- 5.03(5)(h) incorporate assessment information into the development of IFSPs and IEPs.
- 5.03(5)(i) utilize assessment information to develop literacy modality plans for students with visual impairment(s).
- 5.03(6) The special education specialist: visually impaired is knowledgeable about instructional content and practice, specialized instructional strategies and appropriate accommodation(s), and is able to demonstrate these strategies and/or teach learners with visual impairment(s):
 - 5.03(6)(a) the use of the abacus, slate and stylus, Braille writer, electronic note taker(s), talking calculator, tactile graphics, computers and other types of access and adaptive technology.
 - 5.03(6)(b) basic concepts related to content standards.
 - 5.03(6)(c) increasing visual access to and within learning environments related to instruction, the use of print adaptations and optical and non-optical devices.
 - 5.03(6)(d) increasing non-visual access to learning environments.
 - 5.03(6)(e) alternative reasoning and decision-making skills.
 - 5.03(6)(f) organization and study skills.
 - 5.03(6)(g) structured pre-cane orientation and mobility assessment and instruction.
 - 5.03(6)(h) tactual perceptual skills.
 - 5.03(6)(i) health and health issues.
 - 5.03(6)(j) adapted physical and recreational skills.
 - 5.03(6)(k) social and daily living skills.
 - 5.03(6)(l) developing career awareness and providing them with vocational counseling.
 - 5.03(6)(m) promoting self-advocacy.
 - 5.03(6)(n) identifying sources of and acquiring specialized instructional and other relevant materials.
 - 5.03(6)(o) identifying techniques for the adaptation of instructional methods and materials.

- 5.03(7) The special education specialist: visually impaired is knowledgeable about planning for the instruction of students with visual impairment(s) and is able to:
- 5.03(7)(a) develop comprehensive short- and long-range individualized learning programs for students with visual impairment(s) and deaf blindness.
 - 5.03(7)(b) prepare appropriate individual and group lesson plans.
 - 5.03(7)(c) involve the student with visual impairment(s) in setting instructional goals and charting progress.
 - 5.03(7)(d) select, adapt and utilize instructional strategies and materials appropriate to the learning needs of the student with visual impairment(s).
 - 5.03(7)(e) use strategies to help students learn, maintain new skills and be able to generalize those skills across other learning environments.
 - 5.03(7)(f) choose and implement instructional techniques that promote successful transitions for students with visual impairment(s).
 - 5.03(7)(g) evaluate and modify instruction according to student need.
 - 5.03(7)(h) interpret and use multiple sources of assessment data in planning for the instruction of students with visual impairment(s) and deaf blindness.
 - 5.03(7)(i) choose and use appropriate forms of technology to accomplish instructional objectives for students with visual impairment(s) and integrate technology into the instructional process.
 - 5.03(7)(j) sequence, implement and evaluate learning objectives based on standards-based education and the expanded core curriculum for students with visual impairment(s).
 - 5.03(7)(k) teach students with visual impairment(s) to think, solve problems and utilize other cognitive strategies to meet individual learning needs.
- 5.03(8) The special education specialist: visually impaired is knowledgeable about effective planning for and management of the teaching and learning environment to provide a setting conducive to group and individualized learning, and is able to:
- 5.03(8)(a) transcribe, proofread and interline materials in contracted literary, Nemeth and foreign language Braille codes.
 - 5.03(8)(b) utilize specialized equipment and software, such as Braille writers, slate and stylus, computerized Braille transcription and tactile image enhancers, to prepare adapted or modified materials in Braille, accessible print, tactile and other formats appropriate to the assessed needs of students with visual impairment(s).
 - 5.03(8)(c) obtain and organize materials intended to implement instructional objectives for students with visual impairment(s).
 - 5.03(8)(d) design multisensory learning environments that engage the active participation of students with visual impairment(s) in group and individual activities.
 - 5.03(8)(e) design and implement strategies and techniques that facilitate the inclusion of students with visual impairment(s) into a wide variety of educational and community settings.

- 5.03(8)(f) direct the activities of a classroom paraprofessional, volunteer, peer tutor or Braille transcriber.
- 5.03(8)(g) create learning environments that encourage self-advocacy and independence for students with visual impairment(s).
- 5.03(9) The special education specialist: visually impaired is knowledgeable about promoting appropriate student behavior and social interaction skills and demonstrates:
 - 5.03(9)(a) effective learning environment management which engenders positive behavior(s) between and among students, such as, but not limited to, strategies that:
 - 5.03(9)(a)(i) identify ways to address attitudes and behaviors that can positively or negatively influence the deportment and achievement of students with visual impairments;
 - 5.03(9)(a)(ii) effectively instruct students in the development of the social skills needed across educational and living environments;
 - 5.03(9)(a)(iii) identify strategies for preparing students with visual impairment(s) to live harmoniously and productively in a diverse world; and
 - 5.03(9)(a)(iv) identify and address inappropriate behaviors attributable to or caused by visual impairment(s).
- 5.03(10) The special education specialist: visually impaired is knowledgeable about and able to manage student behavior(s) and learning through:
 - 5.03(10)(a) the modification of the learning environment including, but not limited to, schedule, physical arrangement and/or materials.
 - 5.03(10)(b) the selection, implementation and evaluation of appropriate and applicable classroom management strategies for students with visual impairment(s).
 - 5.03(10)(c) the incorporation of social skills training into the curriculum.
 - 5.03(10)(d) utilization of procedures intended to increase student self-awareness, self-control, self-reliance and self-esteem.
 - 5.03(10)(e) preparing students with visual impairment(s) to present themselves in a socially appropriate manner, providing information about, but not limited to, that related to grooming, dress and interpersonal skills.
 - 5.03(10)(f) preparing students to adapt to progressive eye conditions when necessary.
 - 5.03(10)(g) preparing students with visual impairment(s) to appropriately and effectively utilize the services of support personnel.
 - 5.03(10)(h) preparing students with visual impairment(s) to gain access to information about services provided in and for the community.
 - 5.03(10)(i) preparing students with visual impairment(s) to act appropriately in social situations.
 - 5.03(10)(j) preparing students with visual impairment(s) to respond to societal attitudes and actions with positive behavior(s) and self-advocacy.

- 5.03(11) The special education specialist: visually impaired is knowledgeable about communication and collaborative partnerships and demonstrates:
- 5.03(11)(a) effective communication and the ability to collaborate with students, their families, and school and community personnel in identifying and addressing:
 - 5.03(11)(a)(i) typical and/or specific concerns of parents of students with visual impairment(s) and appropriate strategies to assist them in resolving concerns;
 - 5.03(11)(a)(ii) roles of students with visual impairment(s), parents, educational service providers and community personnel in planning individualized programs for students;
 - 5.03(11)(a)(iii) strategies for assisting families and other team members in planning appropriate transitions for students with visual impairment(s);
 - 5.03(11)(a)(iv) unique services, networks and organizations that serve as resources to/for students with visual impairment(s);
 - 5.03(11)(a)(v) roles of paraprofessionals or para-educators who work directly with students with visual impairment(s) and deaf blindness; and
 - 5.03(11)(a)(vi) the necessity for role models for students with visual impairment(s).
- 5.03(12) The special education specialist: visually impaired demonstrates the ability to collaborate with others and is able to:
- 5.03(12)(a) identify and implement strategies for working with students with disabilities, parents, and school and community persons, in a wide variety of learning and learning- related environments.
 - 5.03(12)(b) communicate and consult with students, parents, education service providers and community personnel.
 - 5.03(12)(c) foster respectful and beneficial relationships between and among families and professionals.
 - 5.03(12)(d) encourage and assist families in becoming active participants in the education of their own children.
 - 5.03(12)(e) plan and conduct conferences with families or primary caregivers as required and/or necessary.
 - 5.03(12)(f) collaborate with general education teachers and other school and community personnel regarding the integration of students with disabilities into the general learning environment.
 - 5.03(12)(g) communicate with general education teachers, administrators and other school personnel about the characteristics and needs of students with disabilities.
 - 5.03(12)(h) assist families and other team members in understanding the impact of visual impairment(s) and deaf blindness on learning and experience.
 - 5.03(12)(i) report results of specialized assessments to students with visual impairment(s), their families and pertinent team members in relevant and appropriate ways.

5.03(12)(j) manage and direct the activities of para-educators or peer tutors who work with students with visual impairment(s).

5.03(13) The special education specialist: visually impaired is knowledgeable about professionalism and ethical practices and demonstrates:

5.03(13)(a) appropriate professional practices in contributing to the field of education and to the academic achievement of each individual student including, but not limited to:

5.03(13)(a)(i) decision-making based on the ethical considerations governing the profession of special education, especially as related to the field of the education of the visually impaired learner;

5.03(13)(a)(ii) recognizing cultural bias and how it can affect teaching;

5.03(13)(a)(iii) serving as a role model for students with visual impairment(s);

5.03(13)(a)(iv) participation in consumer and professional organizations and remaining up-to-date with publications and journals relevant to the field of visual impairments; and

5.03(13)(a)(v) the ability to research information related to the learning needs of and outcomes for students with visual impairment(s).

5.03(14) The special education specialist: visually impaired functions in a professional manner by:

5.03(14)(a) demonstrating professional ethics.

5.03(14)(b) accepting the personal characteristic(s) of students with and without visual impairment(s).

5.03(14)(c) remaining up-to-date on literature related to students with visual impairment(s).

5.03(14)(d) participating in professional organizations representing the field of visual impairment(s), as appropriate.

5.03(14)(e) engaging in professional-growth activities which may benefit students with visual impairment(s), their families and/or colleagues.

5.03(14)(f) practicing self-assessment related to instruction, and seeking professional development activities which support the advancement of personal skills and knowledge.

5.04 Special Education Specialist: Deaf/Hard-of-Hearing (Ages Birth-21)

To be endorsed as a special education specialist: deaf/hard-of-hearing, an applicant must hold an earned master's or higher degree in special education: deaf/hard-of-hearing or its equivalent – as determined by the Department of Education – from an accepted institution of higher education; have completed an approved program for the preparation of special education specialists: deaf/hard of hearing including prescribed field experience requirements; and have demonstrated the competencies specified below:

5.04(1) The special education specialist: deaf/hard-of-hearing is knowledgeable about the philosophical, historical and legal foundations of special education and is able to articulate and incorporate into planning for students:

- 5.04(1)(a) current definitions of students with hearing loss including terminology, identification criteria, labeling issues and current incidence and prevalence figures.
- 5.04(1)(b) models, theories and appropriate philosophies that provide the basis for educational practice relevant to students who are deaf or hard-of-hearing.
- 5.04(1)(c) variations in beliefs, traditions and values across cultures and within society, and the effect of the relationships between children who are deaf or hard-of-hearing, their families, schools and communities, and can:
 - 5.04(1)(c)(i) identify resources, model programs, organizations, agencies, research centers and technology that can be of assistance in working with students who are deaf or hard-of-hearing;
 - 5.04(1)(c)(ii) apply understanding of proven theory, of philosophy and of models of effective practice to the education of students who are deaf or hard-of-hearing; and
 - 5.04(1)(c)(iii) articulate the pros and cons of current issues and trends in special education and in educating students who are deaf or hard-of-hearing.
- 5.04(2) The special education specialist: deaf/hard-of-hearing is knowledgeable about factors that impact the learning of students who are deaf or hard-of-hearing and is able to articulate and incorporate into planning for these students:
 - 5.04(2)(a) relevant elements of learning necessary for enhancement of cognitive, emotional and social development.
 - 5.04(2)(b) proven and effective research on communication, socialization and cognition.
 - 5.04(2)(c) cultural dimensions of being deaf or hard-of-hearing.
 - 5.04(2)(d) the specific impact of various etiologies of hearing loss on the sensory, motor and/or learning capability.
 - 5.04(2)(e) knowledge of the effect of family involvement, onset of hearing loss, age of identification, amplification and provision of services.
 - 5.04(2)(f) knowledge of the impact of early and ongoing comprehensible communication.
 - 5.04(2)(g) the effect of sensory input, including both incidental communication and experiences, on the development of language and cognition.
- 5.04(3) The special education specialist: deaf/hard-of-hearing is knowledgeable about and is able to:
 - 5.04(3)(a) demonstrate effective communication strategies to students who are deaf or hard-of-hearing.
 - 5.04(3)(b) describe how to make incidental learning opportunities accessible.
 - 5.04(3)(c) articulate the interrelationship between communication, socialization and cognition.
- 5.04(4) The special education specialist: deaf/hard-of-hearing is knowledgeable about the assessment, effective teaching, service and special services provision and the evaluation of students who are deaf or hard-of-hearing, and is able to:

- 5.04(4)(a) implement formal and informal assessment procedures for eligibility, placement and program planning.
- 5.04(4)(b) articulate legal provisions, regulations and guidelines regarding unbiased diagnostic assessment(s) and the use of instructional assessment measures.
- 5.04(4)(c) incorporate into planning the specifics of policies regarding referral and placement procedures.
- 5.04(4)(d) demonstrate amplification system's parts and articulate function, benefits and limitations of options in group and personal amplification.
- 5.04(4)(e) administer assessment procedures and instruments for students who are deaf or hard-of-hearing and those with additional disabilities, and utilize appropriate assessment tools and informal assessment and evaluation procedures, utilizing natural/heritage/preferred language.
- 5.04(4)(f) use assessment data in making informed instructional decisions and for planning individual programs that result in appropriate service delivery and intervention for students who are deaf or hard-of-hearing.
- 5.04(4)(g) troubleshoot amplification problems and explain the parts and functions of group and personal amplification.
- 5.04(4)(h) develop and implement effective communication plans.
- 5.04(4)(i) plan an educational program to address the needs of students who are deaf or hard-of-hearing and who may have additional disabilities or conditions that impact learning.
- 5.04(5) The special education specialist: deaf/hard-of-hearing is knowledgeable about content standards and practice and is able to:
 - 5.04(5)(a) identify and utilize specialized instructional materials relevant to specific student need and content standards.
 - 5.04(5)(b) incorporate into planning information related but not limited to the syntactic, semantic use of American Sign Language (ASL) and English.
 - 5.04(5)(c) incorporate into planning information related to languages and systems used to communicate with individuals who are deaf or hard-of-hearing.
 - 5.04(5)(d) articulate normal speech development and characteristics of speech development for deaf or hard-of-hearing students.
 - 5.04(5)(e) implement assessment procedures and curricula designed for:
 - 5.04(5)(e)(i) the speech development of students who are deaf or hard-of-hearing and those who may have additional disabilities;
 - 5.04(5)(e)(ii) ASL and English language development;
 - 5.04(5)(e)(iii) stimulating the utilization of residual hearing;
 - 5.04(5)(e)(iv) strategies/techniques related to the promotion of reading development; and

- 5.04(5)(e)(v) written language development.
- 5.04(5)(f) design and implement strategies and techniques for positively affecting the speech development of students who are deaf or hard-of-hearing.
- 5.04(5)(g) design and implement strategies/techniques to effectively instruct students about ASL and English language development.
- 5.04(5)(h) design and implement strategies/techniques for the stimulation and utilization of residual hearing.
- 5.04(5)(i) address in planning ways to facilitate cultural identity, linguistic, academic, cognitive, physical and social-emotional development.
- 5.04(5)(j) plan effective multi-level lessons.
- 5.04(5)(k) incorporate proven and effective research-supported instructional strategies and practices.
- 5.04(5)(l) implement strategies and procedures that effectively facilitate the deaf or hard-of-hearing student's transition to new settings and to meeting life challenges.
- 5.04(5)(m) communicate with advanced proficiency in relevant language(s) (English, ASL) and/or sign systems.
- 5.04(5)(n) select, modify, design, produce and utilize specialized and appropriate media, instructional materials, resources and technology.
- 5.04(5)(o) infuse communication skills into academic areas.
- 5.04(5)(p) apply appropriate and effective first- and second-language teaching strategies to meet student need.
- 5.04(5)(q) promote and encourage speech development; ASL and English language development; the utilization of residual hearing; reading and written language development to students who are deaf or hard-of-hearing.
- 5.04(5)(r) implement multi-level lessons for students who are deaf or hard-of-hearing.
- 5.04(5)(s) develop effective transition plan for students who are deaf or hard-of-hearing.
- 5.04(6) The special education specialist: deaf/hard-of-hearing is knowledgeable about the learning environment and is able to:
 - 5.04(6)(a) demonstrate the adaptations needed within a variety of learning environments and within the community for students who are deaf or hard-of-hearing.
 - 5.04(6)(b) manage assistive devices appropriate for students who are deaf or hard-of-hearing.
 - 5.04(6)(c) select, implement and evaluate effective classroom management strategies.
 - 5.04(6)(d) adapt learning environments to effectively meet needs of students who are deaf or hard-of-hearing and those who may have additional disabilities or special needs.

- 5.04(6)(e) plan and effectively implement instruction for students who are deaf or hard-of-hearing and those with additional disabilities or special needs.
- 5.04(7) The special education specialist: deaf/hard-of-hearing is knowledgeable about promoting student social interaction and independence and is able to:
 - 5.04(7)(a) demonstrate processes for establishing ongoing interactions of students who are deaf or hard-of-hearing with peers and role models who are deaf, hard-of-hearing or hearing.
 - 5.04(7)(b) provide opportunities for interaction with communities of individuals who are deaf, hard-of-hearing or hearing on the local, state and national levels.
 - 5.04(7)(c) provide students with a wide variety of communication strategies which allow effective interaction with people and in places, situations and organizations within the community.
 - 5.04(7)(d) implement strategies for teaching appropriate social skills and behavior in a variety of situations to students who are deaf or hard-of-hearing.
 - 5.04(7)(e) provide appropriate methods of effective self-advocacy to students who are deaf or hard-of-hearing.
 - 5.04(7)(f) articulate social/emotional/psychological developmental and social/emotional issues related to students who are deaf or hard-of-hearing.
 - 5.04(7)(g) promote independence and responsibility to students who are deaf or hard-of-hearing.
 - 5.04(7)(h) effectively teach students who are deaf or hard-of-hearing:
 - 5.04(7)(h)(i) how to use support personnel and contact resources appropriately and effectively;
 - 5.04(7)(h)(ii) how to be self-advocates;
 - 5.04(7)(h)(iii) how to be independent and take responsibility for their own actions;
 - 5.04(7)(h)(iv) about legal procedures, their rights and how to take appropriate action;
 - 5.04(7)(h)(v) to express emotions appropriately; and
 - 5.04(7)(h)(vi) how to use a wide variety of assistive devices.
- 5.04(8) The special education specialist: deaf/hard-of-hearing is knowledgeable about communication and collaborative partnerships and is able to:
 - 5.04(8)(a) provide a wide variety of resources to family members and professionals who are deaf or hard-of-hearing; to assist them in dealing with educational concerns and options, utilizing relevant available services and determining appropriate communication modes; and to identify cultural and community opportunities for students who are deaf or hard-of-hearing.
 - 5.04(8)(b) identify and articulate appropriate roles and responsibilities of educators and support personnel including, but not limited to, interpreters, note-takers and paraprofessionals in the delivery of education and education-related activities and programs to students who are deaf or hard-of-hearing.

- 5.04(8)(c) articulate the effects of communication on the development of family relationships and strategies to facilitate communication in families with children who are deaf or hard-of-hearing.
- 5.04(8)(d) articulate appropriate strategies to promote partnerships and to overcome barriers between families and professionals to effectively meet the needs of students who are deaf or hard-of-hearing.
- 5.04(8)(e) articulate to families and professionals the educational options, communication modes/philosophies, services, cultural issues and community resources available for children who are deaf or hard-of-hearing.
- 5.04(8)(f) facilitate communication between the child who is deaf and his or her family and/or other caregivers when, and as, appropriate.
- 5.04(8)(g) facilitate/oversee coordination of and supervise support personnel including but not limited to interpreters, note-takers and paraprofessionals, to meet the needs of students who are deaf or hard-of-hearing.
- 5.04(8)(h) use collaborative strategies and effective communication skills with individuals who are deaf or hard-of-hearing, parents, school and community personnel in various learning environments.
- 5.04(8)(i) advocate for meeting the social-emotional, educational and communication needs of students who are deaf or hard-of-hearing in a wide variety of settings.
- 5.04(9) The special education specialist: deaf/hard-of-hearing is knowledgeable about professionalism and ethical practice and is able to:
 - 5.04(9)(a) acquire the additional knowledge and skills necessary to effectively educate students who are deaf or hard-of-hearing and to work successfully with their families, other professionals and interested stakeholders.
 - 5.04(9)(b) participate in relevant professional and other organizations and remain current regarding publications and journals relevant to the field of educating students who are deaf or hard-of-hearing.
 - 5.04(9)(c) self-assess, design and implement an ongoing professional development plan relevant to being an effective educator of students who are deaf and hard-of-hearing.

5.05 Early Childhood Special Education Specialist (Ages Birth-8)

~~To be endorsed as an early childhood special education specialist for ages birth-8, an applicant must have completed a degree or non-degree program at the graduate level in early childhood special education that includes field-based experience or practicum; have demonstrated the competencies found at 5.01 of these rules and 5.08 of 1 CCR 301-37; and have demonstrated the additional competencies, knowledge and skills specified below:~~

~~5.05(1) ——— Assessment: Advanced early childhood special education specialists use valid and reliable assessment practices to minimize bias.~~

~~5.05(1)(a) ——— Advanced early childhood special education specialists are knowledgeable of:~~

~~5.05(1)(a)(i) ——— evaluation processes and determination of eligibility;~~

5.05(1)(a)(ii) — a variety of methods for assessing and evaluating the performance of individuals with exceptionalities;

5.05(1)(a)(iii) — strategies for identifying individuals with exceptionalities; and

5.05(1)(a)(iv) — evaluating an individual's success in the general education curriculum.

5.05(1)(b) — Advanced early childhood special education specialists possess specialized knowledge of:

5.05(1)(b)(i) — policy and research implications that promote recommended practices in assessment and evaluation; and

5.05(1)(b)(ii) — systems and theories of child and family assessment.

5.05(1)(c) — Advanced early childhood special education specialists demonstrate the skills to:

5.05(1)(c)(i) — design and use methods for assessing and evaluating programs;

5.05(1)(c)(ii) — design and implement research activities to examine the effectiveness of instructional practices;

5.05(1)(c)(iii) — advocate for evidence-based practices in assessment; and

5.05(1)(c)(iv) — report the assessment of individuals' performance and evaluation of instructional programs.

5.05(1)(d) — Advanced early childhood special education specialists demonstrate the specialized skills to:

5.05(1)(d)(i) — provide leadership in the development and implementation of unbiased assessment and evaluation procedures that include family members as an integral part of the process;

5.05(1)(d)(ii) — provide leadership in the development and implementation of unbiased assessment and evaluation procedures for childcare and early education environments and curricula; and

5.05(1)(d)(iii) — provide leadership when selecting effective formal and informal assessment instruments and strategies.

5.05(2) — Curricular content knowledge: Advanced early childhood special education specialists use their knowledge of general and specialized curricula to improve programs, supports and services at classroom, school, community and system levels.

5.05(2)(a) — Advanced early childhood special education specialists possess specialized knowledge of at least one developmental period or one particular area of disability or delay.

5.05(2)(b) — Advanced early childhood special education specialists demonstrate the specialized skills to:

5.05(2)(b)(i) — apply various curriculum theories and early learning standards, and evaluate their impact;

5.05(2)(b)(ii) — integrate family and social systems theories to develop, implement, and evaluate family and educational plans;

5.05(2)(b)(iii) — incorporate and evaluate the use of universal design and assistive technology in programs and services;

5.05(2)(b)(iv) — design, implement, and evaluate plans to prevent and address challenging behaviors across settings;

5.05(2)(b)(v) — design, implement, and evaluate developmentally responsive learning environments, preventative strategies, program-wide behavior supports, and tiered instruction; and

5.05(2)(b)(vi) — apply interdisciplinary knowledge from the social sciences and the allied health fields.

5.05(3) — Programs, services and outcomes: Advanced early childhood special education specialists facilitate the continuous improvement of general and special education programs, supports, and services at the classroom, school, and system levels for individuals with exceptionalities.

5.05(3)(a) — Advanced early childhood special education specialists are knowledgeable of:

5.05(3)(a)(i) — effects of the cultural and environmental milieu of the child and the family on behavior and learning;

5.05(3)(a)(ii) — theories and methodologies of teaching and learning, including adaptation and modification of curriculum;

5.05(3)(a)(iii) — continuum of program options and services available to individuals with exceptionalities;

5.05(3)(a)(iv) — pre-referral intervention processes and strategies;

5.05(3)(a)(v) — process of developing individual educational programs (IEPs); and

5.05(3)(a)(vi) — developmentally appropriate strategies for modifying instructional methods and the learning environment.

5.05(3)(b) — Advanced early childhood special education specialists possess specialized knowledge of a range of delivery systems for programs and services available for infants and young children and their families

5.05(3)(c) — Advanced early childhood special education specialists demonstrate the skills to:

5.05(3)(c)(i) — develop programs, including the integration of related services, for individuals with exceptionalities based upon a thorough understanding of individual differences;

5.05(3)(c)(ii) — connect educational standards to specialized instructional services;

5.05(3)(c)(iii) — improve instructional programs using principles of curriculum development and modification and learning theory; and

5.05(3)(c)(iv) — incorporate essential components into individualized education plans.

5.05(3)(d) — Advanced early childhood special education specialists demonstrate the specialized skills to:

5.05(3)(d)(i) — design, implement, and evaluate home and community-based programs and services;

5.05(3)(d)(ii) — address medical and mental health issues and concerns when planning, implementing, and evaluating programs and services; and

5.05(3)(d)(iii) — use recommended practices to design, implement and evaluate transition programs and services.

5.05(4) — Research and inquiry: Advanced early childhood special education specialists conduct, evaluate and use inquiry to guide professional practice.

5.05(4)(a) — Advanced early childhood special education specialists are knowledgeable of evidence-based practices validated for specific characteristics of learners and settings.

5.05(4)(b) — Advanced early childhood special education specialists demonstrate the skills to:

5.05(4)(b)(i) — identify and use the research literature to resolve issues of professional practice;

5.05(4)(b)(ii) — evaluate and modify instructional practices; and

5.05(4)(b)(iii) — use educational research to improve instruction, intervention strategies and curricular materials.

5.05(4)(c) — Advanced early childhood special education specialists demonstrate the specialized skills to:

5.05(4)(c)(i) — create and/or disseminate new advances and evidence-based practices;

5.05(4)(c)(ii) — help others understand early development and its impact across the life span; and

5.05(4)(c)(iii) — interpret and apply research to the provision of quality services and program practices to infants, young children and their families in a variety of educational and community settings.

5.05(5) — Leadership and policy: Advanced early childhood special education specialists provide leadership to formulate goals, set and meet high professional expectations, advocate for effective policies and evidence-based practices, and create positive and productive work environments.

5.05(5)(a) — Advanced early childhood special education specialists are knowledgeable of:

5.05(5)(a)(i) — needs of different groups in a pluralistic society;

5.05(5)(a)(ii) — evidence-based theories of organizational and educational leadership;

5.05(5)(a)(iii) — emerging issues and trends that potentially affect the school community and the mission of the school;

5.05(5)(a)(iv) — federal and state education laws and regulations;

5.05(5)(a)(v) — current legal, regulatory, and ethical issues affecting education; and

5.05(5)(a)(vi) — responsibilities and functions of school communities and boards.

5.05(5)(b) — Advanced early childhood special education specialists possess specialized knowledge of:

5.05(5)(b)(i) — sociocultural, historical and political forces that influence diverse delivery systems, including mental health;

5.05(5)(b)(ii) — policy and emerging trends that affect infants and young children, families, resources and services; and

5.05(5)(b)(iii) — community resources on national, state and local levels that impact program planning and implementation and the individualized needs of the child and family.

5.05(5)(c) — Advanced early childhood special education specialists demonstrate the skills to:

5.05(5)(c)(i) — promote a free appropriate public education in the least restrictive environment;

5.05(5)(c)(ii) — promote high expectations for self, staff, and individuals with exceptionalities;

5.05(5)(c)(iii) — advocate for educational policy within the context of evidence-based practices; and

5.05(5)(c)(iv) — mentor teacher candidates, newly certified teachers and other colleagues.

5.05(5)(d) — Advanced early childhood special education specialists demonstrate the specialized skills to:

5.05(5)(d)(i) — advocate on behalf of infants and young children with exceptional needs, and their families, at local, state and national levels;

5.05(5)(d)(ii) — provide leadership to help others understand policy and research that guide recommended practices;

5.05(5)(d)(iii) — provide leadership in the collaborative development of community-based services and resources; and

5.05(5)(d)(iv) — provide effective supervision and evaluation.

5.05(6) — Professional and ethical practice: Advanced early childhood special education specialists use foundational knowledge of the field and professional ethical principles and practice standards to inform special education practice, engage in lifelong learning, advance the profession and perform leadership responsibilities to promote the success of professional colleagues and individuals with exceptionalities.

5.05(6)(a) — Advanced early childhood special education specialists are knowledgeable of:

5.05(6)(a)(i) — legal rights and responsibilities of individuals, staff and parents/guardians;

5.05(6)(a)(ii) — moral and ethical responsibilities of educators; and

5.05(6)(a)(iii) — human rights of individuals with exceptionalities and families.

5.05(6)(b) — Advanced early childhood special education specialists demonstrate the skills to:

- 5.05(6)(b)(i) — model ethical behavior and promote professional standards;
- 5.05(6)(b)(ii) — implement practices that promote success for individuals with exceptionalities;
- 5.05(6)(b)(iii) — use ethical and legal discipline strategies;
- 5.05(6)(b)(iv) — disseminate information on effective school and classroom practices;
- 5.05(6)(b)(v) — create an environment which supports continuous instructional improvement; and
- 5.05(6)(b)(vi) — develop and implement a personalized professional development plan.
- 5.05(6)(c) — Advanced early childhood special education specialists demonstrate the specialized skills to:
 - 5.05(6)(c)(i) — engage in reflective inquiry and professional self-assessment;
 - 5.05(6)(c)(ii) — participate in professional mentoring and other types of reciprocal professional development activities; and
 - 5.05(6)(c)(iii) — participate actively in organizations that represent recommended practices of early intervention and early childhood special education on a national, state, and local level.
- 5.05(7) — Collaboration: Advanced early childhood special education specialists collaborate with stakeholders to improve programs, services and outcomes for individuals with exceptionalities and their families.
 - 5.05(7)(a) — Advanced early childhood special education specialists are knowledgeable of:
 - 5.05(7)(a)(i) — methods for communicating goals and plans to stakeholders; and
 - 5.05(7)(a)(ii) — roles of educators in integrated settings.
 - 5.05(7)(b) — Advanced early childhood special education specialists possess specialized knowledge of:
 - 5.05(7)(b)(i) — roles and responsibilities of personnel in the development and implementation of team-based early childhood special education and early intervention services; and
 - 5.05(7)(b)(ii) — theories, models and research that support collaborative relationships.
 - 5.05(7)(c) — Advanced early childhood special education specialists demonstrate the skills to:
 - 5.05(7)(c)(i) — collaborate to enhance opportunities for learners with exceptionalities; and
 - 5.05(7)(c)(ii) — apply strategies to resolve conflict and build consensus.
 - 5.05(7)(d) — Advanced early childhood special education specialists demonstrate the specialized skills to:
 - 5.05(7)(d)(i) — implement and evaluate leadership and models of collaborative relationships; and
 - 5.05(7)(d)(ii) — collaborate with stakeholders in developing and implementing positive behavior support plans to prevent and address challenging behavior.

5.056 Gifted Education Core (Ages 4-21)

To hold the gifted education core endorsement, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; must hold a Colorado initial or professional teacher or special services license; have completed an approved program for the preparation of gifted education educators, including prescribed field experience and student teaching requirements; have passed any required general education content and/or gifted education assessments; and have demonstrated competency in the seven areas specified below:

5.056(1) Learner development and individual learning differences: An educator with a gifted education core endorsement understands variations in learning and development in cognitive and affective areas between and among individuals with gifts and talents and applies this understanding to provide appropriately meaningful and challenging learning experiences for individuals with exceptionalities. This educator understands that learner differences and development are manifest and monitored via data, bodies of evidence, advanced learning plans (ALPs), academic and affective goals, and multi-tiered system of supports systemic intervention strategies and tools for differentiation, acceleration and enrichment that address advanced learning differences and to support optimal continual development of individual growth and potential. The gifted educator applies knowledge of:

5.056(1)(a) — gifted learner development in order to:

5.056(1)(a)(i) — apply documented current theories related to intelligence, creativity, brain research, underlying exceptional cognition, asynchronicity and the expression of talent as it applies to all gifted students, including early childhood students, twice-exceptional learners (i.e., gifted and talented students with disabilities), highly gifted students, underachieving high-potential students, culturally and ethnically diverse gifted students, high-potential linguistically diverse students, students with unique affective needs, high-potential economically disadvantaged students and others;

5.056(1)(a)(ii) — understand documented theories of human development, ages 4-21, as specifically related to developmentally appropriate strategies for gifted and talented learners;

5.056(1)(a)(iii) — recognize the unique characteristics of gifted, talented and creative students, preschool through grade 12, and seek opportunities for enhancing their achievement as well as social-emotional development;

5.056(1)(a)(iv) — apply understanding of development and individual academic and affective differences to respond to the needs of individuals with gifts;

5.056(1)(a)(v) — identify how families and communities contribute to the development of individuals with gifts and talents and support their roles in the development of individuals with gifts; and

5.056(1)(a)(vi) — recognize the influence of social and emotional development on interpersonal relationships and learning of individuals with gifts and talents.

5.056(1)(b) — learning traits, needs and differences in order to:

5.056(1)(b)(i) — evaluate the need for and draw upon multiple, appropriate gifted learner data, advanced learning plans (ALPs), evidence-based practices for differentiation including acceleration strategies, systemic support systems, strategies and specialized support services to assist with meeting the unique

learning-related affective, social and cognitive needs of gifted and talented students related but not limited to:

5.056(1)(b)(i)(A) various types of giftedness and talent, including creativity;

5.056(1)(b)(i)(B) asynchronous development (i.e., the incongruences that may occur between a student's intellectual maturity and his/her social, emotional and physical development);

5.056(1)(b)(i)(C) psychological support;

5.056(1)(b)(i)(D) cognitive development and affective characteristics; and

5.056(1)(b)(i)(E) social and behavioral characteristics and needs, impact of multiple exceptionalities and multi-potentialities on gifted students.

5.056(1)(b)(ii) interpret gifted learner data to develop and monitor advanced learning plans (ALPs) and provide appropriate evidence-based practices for differentiation to support ongoing academic achievement and learning-related affective development of gifted and talented students; and

5.056(1)(b)(iii) apply concepts and interrelationships of giftedness, intelligence, creativity and leadership.

5.056(1)(c) diversity in order to:

5.056(1)(c)(i) recognize how language, culture, economic status, family background and/or area of disability can influence the learning of individuals with gifts and talents;

5.056(1)(c)(ii) appreciate influences of diversity factors, different beliefs, traditions and values across and within diverse groups as cognitive, social, emotional, cultural, linguistic and environmental effects that enhance or inhibit the development of giftedness; and

5.056(1)(c)(iii) seek to understand how language, culture and family background interact with an individual's predispositions to impact academic and social behavior, attitudes, values and interests.

5.056(2) Learning environment and structures: An educator with a gifted education core endorsement creates safe, inclusive and culturally responsive learning environments so that individuals with gifts and talents become effective learners and develop social and emotional well-being. The gifted educator applies knowledge of:

5.056(2)(a) social-emotional aspects in order to:

5.056(2)(a)(i) apply strategies for addressing specific social and emotional aspects that are unique to the gifted learner;

5.056(2)(a)(ii) create a safe, nurturing classroom environment that encourages mutual respect and emotional well-being;

5.056(2)(a)(iii) establish an environment in which creativity and giftedness can emerge and where students can feel safe to acknowledge, explore and express their uniqueness;

5.056(2)(a)(iv).—acknowledge the value of each gifted student's contributions to the quality of learning; and

5.056(2)(a)(v).—demonstrate understanding of the multiple environments that are part of a continuum of services for individuals with gifts and talents, including the advantages and disadvantages of various settings, by intentionally modifying classroom environments for different purposes.

5.056(2)(b).—diversity in order to create a classroom environment that values diversity and individuality and fosters understanding and features intercultural experiences.

5.056(2)(c).—skill development in order to:

5.056(2)(c)(i).—plan for the development of coping skills in individuals with gifts and talents to address personal and social issues including discrimination and stereotyping;

5.056(2)(c)(ii).—modify learning environments to enhance the independence, self-awareness and self-efficacy of gifted students;

5.056(2)(c)(iii).—support students as they adapt to changes in their learning environments; and

5.056(2)(c)(iv).—apply strategies for the development in gifted students of habits of mind, attitudes and skills needed for future success, such as the production of knowledge; independent, lifelong learning; self-evaluation; interdependence and goal-setting (realistic, challenging goals for self, academics and school-to-career).

5.056(2)(d).—relationships in order to:

5.056(2)(d)(i).—establish a nurturing, respectful and caring relationship with each student and encourage relationships among students;

5.056(2)(d)(ii).—plan for the development of social interaction that encourages positive relationships among students and that builds collaboration skills; and

5.056(2)(d)(iii).—facilitate appropriate flexible grouping practices for educational reasons.

5.056(3).—Instructional planning and strategies: An educator with a gifted education core endorsement selects, adapts and uses a repertoire of evidence-based instructional strategies to advance the learning of individuals with gifts and talents. The gifted educator applies knowledge of:

5.056(3)(a).—curriculum in order to:

5.056(3)(a)(i).—develop long-range plans anchored in both general and special curricula;

5.056(3)(a)(ii).—apply theories and research models that form the basis of curriculum development and instructional practice for individuals with gifts and talents;

5.056(3)(a)(iii).—design and prescribe appropriate differentiated gifted program and curriculum options that are based on research-supported instructional strategies which include conceptual depth, advanced technological skills, accelerated presentation and pace, and creativity;

5.056(3)(a)(iv) — apply documented best practices for teaching gifted and talented students, including those practices for the design and delivery of curriculum and the assessment of student learning including varied options and methods for acceleration, modification of content, content extensions (for depth and complexity) and expanded learning opportunities for students in order to meet specialized needs that may include resources beyond the classroom (mentorships, internships, dual enrollment, etc.);

5.056(3)(a)(v) — foster the development of leadership skills through structured group processes;

5.056(3)(a)(vi) — create environments and communicate high expectations for gifted students through rigorous learning activities; and

5.056(3)(a)(vii) — promote active engagement in meaningful and challenging activities that extend learning.

5.056(3)(b) — diversity in order to:

5.056(3)(b)(i) — demonstrate understanding of cultural and linguistic factors, as well as the implications of being gifted and talented;

5.056(3)(b)(ii) — design differentiated learning plans for individuals with gifts and talents including twice-exceptional students and individuals from diverse backgrounds;

5.056(3)(b)(iii) — integrate perspectives of diverse groups into planning instruction for individuals with gifts and talents; and

5.056(3)(b)(iv) — select curriculum resources, strategies and product options that respond to cultural, linguistic and intellectual differences.

5.056(3)(c) — social-emotional aspects in order to plan and implement strategies for addressing the unmet social and emotional strengths and needs facing gifted students that differ from those of the general population.

5.056(3)(d) — data-driven decisions in order to:

5.056(3)(d)(i) — systematically translate shorter-range ALP academic and affective goals and objectives that take into consideration an individual's abilities and needs, the learning environment and cultural and linguistic factors; and

5.056(3)(d)(ii) — evaluate the match between the identified educational needs of the student and appropriate and relevant strategies, programs and services.

5.056(4) — Curricular content knowledge: An educator with a gifted education core endorsement demonstrates mastery of and pedagogical expertise in the content taught and uses knowledge of general and specialized curricula to advance learning for individuals with gifts and talents. The gifted educator applies knowledge of:

5.056(4)(a) — differentiation in order to:

5.056(4)(a)(i) — provide needs-based intensive research-based literacy and numeracy skill development and integrate such skills into lessons and assignments as well as across subject areas;

5.056(4)(a)(ii) —implement cognitively engaging instruction intended to enhance student thinking, involve them in their own academic progress and create climates that encourage risk-taking, thinking outside the box and real-life scenarios;

5.056(4)(a)(iii) —interpret data in order to supplement or modify assessments to address learning needs of individuals with gifts and talents;

5.056(4)(a)(iv) —apply research-based effective differentiation strategies and instructional best practices to address all needs, including affective needs, of gifted learners; and

5.056(4)(a)(v) —select, adapt and create appropriate, challenging materials in order to differentiate instructional strategies through general and specialized curricula.

5.056(4)(b) —diversity in order to:

5.05(4)(b)(i) —apply understanding of diversity and individual learning differences to inform the selection, development and implementation of comprehensive curricula for individuals with exceptionalities; and

5.05(4)(b)(ii) —integrate perspectives of diverse groups into planning instruction for individuals with gifts and talents.

5.056(4)(c) —cross-disciplinary curriculum in order to:

5.056(4)(c)(i) —develop lessons that reflect the interconnectedness of content areas/disciplines;

5.056(4)(c)(ii) —understand the role of central key concepts and structures of the discipline in order to implement instructional strategies that ensure that instruction articulates content and interdisciplinary connections;

5.056(4)(c)(iii) —use understanding of gifted learner needs to organize knowledge, integrate cross-disciplinary skills and apply meaningful learning progressions within and across grade levels; and

5.056(4)(c)(iv) —accelerate learning by elaborating on current lesson with connections to prior lessons within the content area and/or with other disciplines.

5.056(4)(d) —thinking skills in order to:

5.056(4)(d)(i) —implement tools of inquiry in content areas including higher-level thinking, critical-thinking and reasoning;

5.056(4)(d)(ii) —apply strategies of creativity, acceleration, depth and complexity in academic subject matter and specialized domains; and

5.056(4)(d)(iii) —facilitate in-depth studies, individual investigations and learner-directed experiences.

5.056(5) —Assessment and evaluation: An educator with a gifted education core endorsement is knowledgeable about the identification and assessment of student needs and uses formative and summative information from data to incorporate appropriate planning, methods and processes to meet the needs of gifted and talented students in all domains. Advanced learning plans (ALPs) serve as a "road map" and are collaboratively developed specific to individual gifted learner needs and goals and are

used to determine acceleration needs, differentiation of instruction and provisions for affective support. The gifted educator applies knowledge of:

5.056(5)(a) — diversity in order to:

- 5.056(5)(a)(i) — understand factors inhibiting the recognition of the potential of students who are gifted from underserved populations (including, but not limited to, students who are female, disabled, racially or ethnically diverse, economically disadvantaged, underachieving, rural and/or highly gifted or twice-exceptional) and use multiple sources, portfolios and other data for a body of evidence when considering students for identification;
- 5.056(5)(a)(ii) — apply defensible methods for screening, identifying and assessing students who are gifted, including under-served populations;
- 5.056(5)(a)(iii) — demonstrate understanding of the unique and sophisticated means by which individuals with gifts and talents including those from culturally diverse backgrounds may demonstrate their learning; and
- 5.056(5)(a)(iv) — use assessment results to develop long- and short-range goals and objectives that take into consideration an individual's abilities and needs, the learning environment and other factors related to diversity.

5.056(5)(b) — identification in order to:

- 5.056(5)(b)(i) — understand the process of and procedures for identification, legal policies and ethical principles of measurement and assessment related to referral, eligibility, program planning, instruction and placement for individuals with gifts and talents;
- 5.056(5)(b)(ii) — implement technically sound, valid and reliable qualitative and quantitative instruments that minimize bias in identifying students for gifted education programs and services;
- 5.056(5)(b)(iii) — use multiple methods of assessment and data sources in making educational decisions about identification of individuals with gifts and talents; and
- 5.056(5)(b)(iv) — assess social-emotional needs of the gifted student in order to develop ALP goals specific to affective needs of the individual.

5.056(5)(c) — instruction in order to:

- 5.056(5)(c)(i) — use and interpret qualitative and quantitative assessments and information, aligned with Department of Education identification guidelines and procedures, to develop a profile of the strengths and weaknesses of each student with gifts and talents;
- 5.056(5)(c)(ii) — interpret results of relevant data to diagnose educational needs and align instruction with academic standards and student assessment results;
- 5.056(5)(c)(iii) — monitor and adjust instruction to enhance ongoing learning progress and modify learning plans based on ongoing assessment of individuals progress;
- 5.056(5)(c)(iv) — apply a variety of pre-, formative and summative assessment methods and evaluate student performance based on multiple measures, employing

alternative assessments and technologies such as performance-based assessment, portfolios and computer simulations, differentiated product-based assessments and off-level standardized assessments;

5.056(5)(c)(v) —use assessment results to select, adapt and create materials to differentiate instructional strategies and general and specialized curricula to challenge individuals with gifts and talents at appropriate instructional levels. Use knowledge of measurement principles and practices to differentiate assessments and interpret results to guide educational decisions for individuals with gifts and talents;

5.056(5)(c)(vi) —understand the affective aspects of giftedness that may affect a learner's achievement (perfectionism, self-concept, etc.); and

5.056(5)(c)(vii) —use results from technically sound informal assessments (surveys, checklists, screening tools, observations, et.al.) to determine appropriate affective supports.

5.056(5)(d) —communication in order to:

5.056(5)(d)(i) —provide and implement actionable, timely, specific and individualized feedback for growth, learning and challenge;

5.056(5)(d)(ii) —involve students in self-assessment and use formal and informal assessment feedback to monitor their learning;

5.056(5)(d)(iii) —engage individuals with gifts and talents in evaluating the quality of their own learning and performance and in setting future goals and objectives; and

5.056(5)(d)(iv) —communicate and interpret assessment information to students with gifts and talents and their parents/guardians.

5.056(5)(e) —assessment of programming in order to:

5.056(5)(e)(i) —provide information and input for evaluation of gifted programming; and

5.056(5)(e)(ii) —evaluate implementation and effectiveness of strategies used to ensure delivery of program/service goals and objectives for all gifted learners, including those from diverse cultural and/or linguistic backgrounds.

5.056(6) —Professional learning and ethical practice: An educator with a gifted education core endorsement applies foundational knowledge of the field and professional ethical principles and programming standards to inform gifted education practice, to engage in lifelong learning and to advance the profession. The gifted educator applies knowledge of:

5.056(6)(a) —foundations in order to demonstrate knowledge about the foundations of the education of the gifted and the talented student including, but not limited to, the history of the education of the gifted and talented; proven and documented theories of giftedness; the wide variety of curricular strategies that provide for the effective teaching of gifted and talented students to include the current and evolving discipline based on philosophies, evidence-based principles and theories, relevant laws and policies, and diverse and historical points of view; and human issues.

5.056(6)(b) —diversity in order to:

5.056(6)(b)(i).—demonstrate understanding of key issues and trends including diversity and inclusion that connect general, special and gifted and talented education;

5.056(6)(b)(ii).—respond appropriately to the impact of culture and language as it interacts with an individual's gifts and talents;

5.056(6)(b)(iii).—recognize and plan for the many aspects of diversity of individuals with gifts and talents and their families;

5.056(6)(b)(iv).—understand that personal and cultural frames of reference affect one's teaching of individuals with gifts and talents, including biases about individuals from diverse backgrounds and twice-exceptional learners; and

5.056(6)(b)(v).—assess and evaluate personal skills and limitations in regard to the impact of the dominant culture's role in shaping schools and recognize how differences in values, languages and customs between school and home may provide opportunities for adjustments.

5.056(6)(c).—ethical practice in order to:

5.056(6)(c)(i).—maintain confidentiality of student, family and fellow teacher interactions, as well as student data, while using professional ethical principles, ethical practices and specialized program standards with all individuals with exceptionalities by supporting and using linguistically and culturally responsive practices;

5.056(6)(c)(ii).—act in compliance with laws, policies and standards of ethical practice by engaging in professional activities that promote growth in individuals with gifts and talents and update him/herself on evidence-based best practices; and

5.056(6)(c)(iii).—support positive and productive work environments by creating and maintaining collegial and productive work environments that respect and safeguard the rights of individuals with exceptionalities and their families.

5.056(6)(d).—professional growth in order to:

5.056(6)(d)(i).—view him/herself as a lifelong learner and regularly reflect on and adjust teaching practices, including self-evaluation of instruction by practice through continuous research-supported professional development;

5.056(6)(d)(ii).—reflect on personal practice to improve teaching and guide professional growth by involvement in professional development organizations, conferences, workshops and publications that are relevant to the field of gifted education; and

5.056(6)(d)(iii).—continuously broaden and deepen professional knowledge and expand expertise in regard to instructional technologies, curriculum standards, effective teaching strategies and assistive technologies that support access to and learning of challenging content by including current state standards, skills and local and state input.

5.056(7).—Collaboration and communication: An educator with a gifted education core endorsement possesses skills in communicating, teaming and collaborating with diverse individuals and across diverse groups; demonstrates competence in interpersonal and technical communication skills as well as advanced oral and written skills; and applies knowledge of regulations and laws regarding confidentiality. The gifted educator applies knowledge of:

5.056(7)(a) — ethics in order to maintain confidential communication about individuals with gifts and talents.

5.056(7)(b) — cultural responsiveness in order to:

5.056(7)(b)(i) — provide guardians/parents with information in their native language regarding diverse behaviors and characteristics that are associated with giftedness and information that explains the nature and purpose of gifted programming options;

5.056(7)(b)(ii) — understand how the characteristics of one's own culture and use of standard English can differ from other cultures and uses of language;

5.056(7)(b)(iii) — adjust and match communication methods to an individual's language proficiency and cultural and linguistic differences; and

5.056(7)(b)(iv) — implement ways of behaving and communicating that lead to more accurate interpretation and greater understanding among all cultural and linguistic groups.

5.056(7)(c) — effective communication in order to:

5.056(7)(c)(i) — recognize the importance of using verbal, nonverbal and written language effectively;

5.056(7)(c)(ii) — use communication strategies and resources to facilitate understanding of subject matter for individuals with gifts and talents who are English language learners;

5.056(7)(c)(iii) — collaborate with families, professional colleagues and other educators to use data to make identification decisions and select, adapt and use evidence-based strategies that promote challenging learning opportunities in general and specialized curricula;

5.056(7)(c)(iv) — implement strategies for advocating for students who are gifted and for enhancing community perceptions, interactions and involvement regarding gifted education;

5.056(7)(c)(v) — facilitate school to career/life actions in a collaborative context that includes individuals with gifts and talents, families, professional colleagues and personnel from other agencies, as appropriate; and

5.056(7)(c)(vi) — effect change by establishing a leadership role with parents, colleagues and other stakeholders through planned involvement and collaborative efforts that promote gifted student education.

5.056(8) — An educator with a gifted education core endorsement is knowledgeable about professionalism and ethical practice and is able to:

5.056(8)(a) — acquire the additional knowledge and skills necessary to effectively educate students with gifts and talents and to work successfully with their families, other professionals and interested stakeholders.

5.056(8)(b).—participate in relevant professional and other organizations and remain current regarding publications and journals relevant to the field of educating students with gifts and talents.

5.056(8)(c).—self-assess, design and implement an ongoing professional development plan relevant to being an effective educator of students with gifts and talents.

5.067 Gifted Education Specialist (Ages 4-21)

To be endorsed as a gifted education specialist, a candidate must hold an earned master's or higher degree in gifted education from an accepted institution of higher education; have completed an approved program for the preparation of gifted education specialists, including prescribed field experience and student teaching requirements; hold a Colorado initial or professional teacher license with a gifted education core endorsement or demonstrate through multiple performance measures the competencies required for a gifted education core endorsement:

5.067(1).—Leadership and policy: The gifted education specialist provides leadership to formulate goals, set and meet high professional expectations, advocate for effective policies and evidence-based practices and is guided by professional ethics and practice standards. In this advanced role, the gifted educator has leadership responsibilities for promoting the success of individuals with exceptional learning needs, their families and colleagues. The gifted education specialist creates supportive environments that safeguard the legal rights of students, families and school personnel through policies and procedures that promote ethical and professional practice. The gifted education specialist applies knowledge of:

5.076(1)(a).—accountability in order to:

5.067(1)(a)(i).—articulate public policy as it relates to the development and implementation of programs and strategies for gifted and talented students that are consistent with and aligned to adopted policies and objectives of the school district;

5.067(1)(a)(ii).—integrate gifted education into the school's and district's educational program design, the delivery of instruction and other educational processes, and the organization of the school day;

5.067(1)(a)(iii).—understand legal issues impacting the field of gifted education;

5.067(1)(a)(iv).—prepare budgets, grants and reports;

5.067(1)(a)(v).—apply knowledge of theories, evidence-based practices, relevant laws and policies to advocate for programs, supports and a continuum of services for individuals with exceptionalities; and

5.067(1)(a)(vi).—ensure privacy issues in regard to individual students and record-keeping.

5.067(1)(b).—collaboration in order to:

5.067(1)(b)(i).—demonstrate effective leadership skills for designing and implementing programs for and delivering instruction to gifted students;

5.067(1)(b)(ii).—utilize effective leadership skills for designing and implementing programs for and delivering instruction to gifted students;

- 5.067(1)(b)(iii) —provide leadership to create procedures that respect all individuals and permit professionals to practice ethically;
- 5.067(1)(b)(iv) —create positive and productive work environments by sharing information regarding positive impacts with colleagues;
- 5.067(1)(b)(v) —implement strategies to promote collegial understanding of the academic and affective needs of gifted students among regular classroom teachers, administrators and boards of education; and
- 5.067(1)(b)(vi) —work with professional, governmental and/or community agencies to advocate for curricular, school and instructional improvements.
- 5.067(1)(c) —advocacy in order to:
 - 5.067(1)(c)(i) —communicate with policy makers and the general public about issues inherent in the education of gifted and talented students and about how to resolve concerns appropriately, effectively and practically;
 - 5.067(1)(c)(ii) —discuss potential improvements to policies and procedures with administrators to better address student, family and school needs;
 - 5.067(1)(c)(iii) —contribute to school and/or district committees to improve and align gifted services for students and their families;
 - 5.067(1)(c)(iv) —promote appropriate programming regarding the education of gifted and talented students to external agencies and groups;
 - 5.067(1)(c)(v) —promote policies and practices that improve programs, services and outcomes for individuals with exceptionalities;
 - 5.067(1)(c)(vi) —seek allocation of appropriate resources for the preparation and professional development of all personnel who serve individuals with exceptionalities; and
 - 5.067(1)(c)(vii) —provide opportunities and support for acceleration for gifted students in content, process and/or product.
- 5.067(1)(d) —professional development in order to:
 - 5.067(1)(d)(i) —promote high professional self-expectations and help others understand the needs of individuals with exceptional learning needs within the context of an organization's mission;
 - 5.067(1)(d)(ii) —plan, facilitate and/or provide professional development activities for increasing the knowledge and skills of regular classroom teachers in the areas of gifted identification methods and procedures, specific research-based instructional strategies and curriculum for gifted learners, and assessment methods and data-analysis to enhance the general improvement of the education of gifted and talented students;
 - 5.067(1)(d)(iii) —structure, direct and supervise the activities of para-educators, volunteers and tutors; and

5.067(1)(d)(iv) — participate in self-evaluation and in organizations and activities that provide professional development opportunities and information that can increase professional competence and contribute to the advancement of the education of the gifted and talented student.

5.067(2) — Collaboration, communication and coordination: The gifted education specialist has a deep understanding of the centrality and importance of consultation and collaboration to the roles within gifted education and uses this deep understanding to improve programs, services and outcomes for individuals with exceptional learning needs. The gifted education specialist understands the significance of the role of collaboration and promotes understanding, resolves conflicts and builds consensus among both internal and external stakeholders to provide services to individuals with exceptional learning needs and their families. The gifted education specialist possesses current knowledge of research on stages and models in both collaboration and consultation, and ethical and legal issues related to consultation and collaboration, and applies knowledge of:

5.067(2)(a) — diversity in order to recognize cultural factors that promote effective communication and collaboration and to respond respectfully to individuals, families, school personnel and specific communities/community members in order to enhance or improve opportunities for gifted students.

5.067(2)(b) — collaboration in order to:

5.067(2)(b)(i) — maximize opportunities to promote understanding, resolve conflicts and build consensus for improving programs, services and outcomes for individuals with exceptionalities;

5.067(2)(b)(ii) — identify effective communication, collaboration, consultation and leadership skills and apply these skills to the effective implementation of education for gifted learners;

5.067(2)(b)(iii) — apply effective models and strategies for consultation, conferencing and collaboration with families and individuals with gifts and talents;

5.067(2)(b)(iv) — coordinate transitions between grade levels and buildings;

5.067(2)(b)(v) — implement goals and expectations through the advanced learning plan (ALP) process; and

5.067(2)(b)(vi) — identify stakeholders and develop an ongoing plan for including and communicating with all stakeholders including classroom teachers, special services providers, parents, community members and students.

5.067(2)(c) — effective problem-solving in order to:

5.067(2)(c)(i) — use group problem-solving skills to develop, implement and evaluate collaborative activities;

5.067(2)(c)(ii) — identify potential problems or issues, brainstorm possible solutions, evaluate and select best alternatives, develop a plan for implementation, implement and reflect on the process and results; and

5.067(2)(c)(iii) — implement strategic planning in collaboration with teachers and district or administrative unit personnel in order to improve gifted student services.

5.067(3).—Research and inquiry: The gifted education specialist has a comprehensive knowledge of gifted education as an evolving and changing discipline based on philosophies, evidence-based principles and theories, relevant laws and policies, diverse and historical points of view and issues that have influenced and continue to influence gifted education and the education of and services for individuals with exceptionalities both in school and in society. The gifted education specialist applies knowledge of:

5.067(3)(a).—gifted education history and current theories in order to:

5.067(3)(a)(i).—demonstrate comprehensive understanding of the foundations of education of the gifted and the talented student including but not limited to the history of the education of the gifted and talented, as well as proven and documented theories of giftedness;

5.067(3)(a)(ii).—distinguish between theory and empirically proven research;

5.067(3)(a)(iii).—apply understanding of current literature related to gifted education;

5.067(3)(a)(iv).—recommend a variety of research-based curricular strategies that provide for the effective teaching of gifted and talented students; and

5.067(3)(a)(v).—identify, critique and utilize research and applicable theory of curricular strategies as a basis for decision-making and practice for gifted students.

5.067(3)(b).—data-analysis and measurement in order to:

5.067(3)(b)(i).—interpret data as a basis for decision-making;

5.067(3)(b)(ii).—conduct action research in order to investigate an area of interest/s to effect change at a local level; and

5.067(3)(b)(iii).—evaluate identification procedures, curriculum and gifted programming policies and procedures to revise and improve gifted student education and opportunities.

5.067(4).—Curriculum content: Curriculum and instructional planning is at the center of gifted and talented education. The gifted education specialist develops long-range plans anchored in both general and special curricula and systematically translates shorter-range goals and objectives that take into consideration an individual's abilities and needs, the learning environment and cultural and linguistic factors. Understanding of these factors, as well as the implications of being gifted and talented, guides the selection, adaptation and creation of materials and use of differentiated instructional strategies. Learning plans are modified based on ongoing assessment of the individual's progress. The gifted education specialist applies knowledge of:

5.067(4)(a).—research in order to:

5.067(4)(a)(i).—use information from theories and research to revise and/or differentiate units, lesson plans and strategies for curriculum development and instructional practice for individuals with gifts and talents;

5.067(4)(a)(ii).—apply appropriate theoretical models, structures and systems to the development of gifted programs and services; and

5.067(4)(a)(iii) — evaluate and recommend program/services prototypes, grouping practices and educational principles that offer appropriate foundations for the development of a defensible program/service for gifted education.

5.067(4)(b) — general and specialized curricula in order to:

5.067(4)(b)(i) — develop long-range plans anchored in both general and special curricula, and systematically translate shorter-range goals and objectives that take into consideration an individual's abilities and needs, the learning environment and cultural and linguistic factors;

5.067(4)(b)(ii) — improve programs, supports and services at classroom, school, community and educational system levels;

5.067(4)(b)(iii) — apply pedagogical content knowledge to instructing learners with gifts and talents;

5.067(4)(b)(iv) — emphasize the development, practice and transfer of advanced knowledge and skills across environments throughout the lifespan leading to creative, productive careers in society for individuals with gifts and talents;

5.067(4)(b)(v) — develop scope and sequence plans for individuals with gifts and talents; and

5.067(4)(b)(vi) — provide opportunities for acceleration in content areas.

5.067(4)(c) — diversity in order to:

5.067(4)(c)(i) — apply understanding of diversity and individual learning differences to inform the selection, development and implementation of comprehensive curricula for individuals with exceptionalities; and

5.067(4)(c)(ii) — select curriculum resources, strategies and product options that respond to cultural, linguistic and intellectual differences among individuals with gifts and talents.

5.067(4)(d) — differentiation in order to:

5.067(4)(d)(i) — recognize features that distinguish differentiated curriculum from general curricula for individuals with exceptional learning needs;

5.067(4)(d)(ii) — align differentiated instructional plans with local, state and national curricular standards;

5.067(4)(d)(iii) — select and adapt a variety of differentiated curricula that incorporate advanced, conceptually challenging, in-depth, distinctive and complex content; and

5.067(4)(d)(iv) — apply models for delivery of appropriately differentiated content, processes, products, affects and learning environments (i.e., unique, complex and abstract) designed to meet the unique cognitive and affective needs of gifted learners.

5.067(4)(e) — standards in order to:

5.067(4)(e)(i).—use deep understanding of educational standards to help all individuals with exceptional learning needs access challenging curriculum; and

5.067(4)(e)(ii).—apply knowledge of common core standards and understand the levels of rigor embedded in the standards.

5.067(4)(f).—individual differences in order to:

5.067(4)(f)(i).—emphasize curriculum for individuals with gifts and talents within cognitive, affective, aesthetic, social and linguistic domains;

5.067(4)(f)(ii).—integrate academic and career guidance experiences into the learning plan for individuals with gifts and talents; and

5.067(4)(f)(iii).—provide and/or facilitate social-emotional support to meet specific gifted student affective needs.

5.067(5).—Assessment: Assessment is critical to the advanced role of the gifted education specialist. Underlying assessment is the knowledge of systems, theories and standards-related educational assessment, along with skills in examining the technical adequacy of instruments and the implementation of evidence-based practices in assessment. It is critical that assessments that minimize bias are used in the selection of instruments, methods and procedures for both programs and individuals. With respect to assessment of individuals with gifts and talents, the gifted education specialist applies knowledge and skill to all stages and purposes of assessment, including the identification of abilities, strengths and interests, and when monitoring and reporting learning progress in the general education curriculum as well as in the specialized curriculum in their gifted education placement. The gifted education specialist applies knowledge of:

5.067(5)(a).—technical aspects in order to understand measurement theory and practices for addressing issues of validity, reliability, norms, bias and limitations as well as interpretation of assessment results.

5.067(5)(b).—assessment for identification in order to:

5.067(5)(b)(i).—recommend and implement valid and reliable assessment practices and approaches to minimize bias for identifying students with gifts and talents;

5.067(5)(b)(ii).—review, select and use multiple psychometrically sound, nonbiased, equitable qualitative and quantitative instruments from a variety of sources to identify individuals with gifts and talents in order to assess their diverse abilities, strengths, talents and interests;

5.067(5)(b)(iii).—provide assessment tools in the child's native language or in nonverbal formats.

5.067(5)(b)(iv).—interpret multiple assessments in different domains and understand the uses and limitations of the assessments in identifying the needs of students with gifts and talents; and

5.067(5)(b)(v).—inform all parents/guardians about the identification process, obtain parental/ guardian permission for assessments, use culturally sensitive checklists and elicit evidence regarding the child's interests and potential outside of the classroom setting.

5.067(5)(c).—assessment of instruction in order to:

- 5.067(5)(c)(i).—monitor the progress of individuals with gifts and talents in the general education and specialized curricula;
- 5.067(5)(c)(ii).—pre-assess the learning needs of individuals with gifts and talents in various domains and adjust instruction based on ongoing, continual assessment;
- 5.067(5)(c)(iii).—analyze student results in order to determine most effective practices and supports;
- 5.067(5)(c)(iv).—provide appropriate assessments that require higher-level thinking and application of skills to a final product or performance; and
- 5.067(5)(c)(v).—monitor and adjust expectations for student goals as stated on the advanced learning plan.

5.067(6).—Professional and ethical practice: The gifted education specialist uses foundational knowledge of the field, professional ethical principles and program standards to inform gifted education practice, engage in lifelong learning, advance the profession and perform leadership responsibilities to promote the success of professional colleagues and individuals with exceptionalities. The gifted education specialist applies knowledge of:

5.067(6)(a).—professional development in order to:

- 5.067(6)(a)(i).—lead professional development efforts and facilitate learning communities to increase professional knowledge and expertise focused on addressing gifted student needs;
- 5.067(6)(a)(ii).—align professional development initiatives with school and district initiatives that address gifted education instructional strategies based on current research;
- 5.067(6)(a)(iii).—advocate for professional development that is evidence-based and targeted toward improving gifted student outcomes;
- 5.067(6)(a)(iv).—plan, present and evaluate professional development focusing on effective and ethical practice at all organizational levels; and
- 5.067(6)(a)(v).—collaborate with district personnel and teachers to develop and implement a long-term professional development plan focused on increasing educator knowledge in the area of gifted education.

5.067(6)(b).—diversity in order to:

- 5.067(6)(b)(i).—demonstrate high professional expectations and ethical practice and create supportive environments that increase diversity at all levels of gifted and talented education;
- 5.067(6)(b)(ii).—model and promote respect for all individuals and facilitate ethical professional practice; and
- 5.067(6)(b)(iii).—understand and implement district and state policies designed to foster equity in gifted programming and services.

5.067(6)(c).—professional responsibility in order to:

5.067(6)(c)(i).—actively facilitate and participate in the preparation and induction of prospective gifted educators;

5.067(6)(c)(ii).—promote the advancement of the gifted profession;

5.067(6)(c)(iii).—implement performance feedback from supervisor and/or colleagues to improve practice;

5.067(6)(c)(iv).—advocate for laws based on solid evidence-based knowledge to support high-quality education for individuals with exceptional learning needs;

5.067(6)(c)(v).—conduct applied work to contribute to field; and

5.067(6)(c)(vi).—ensure confidentiality of student information and records.

5.067(7).—Programming services and program evaluation: The gifted education specialist facilitates the continuous improvement of general and gifted education programs, supports and services at the classroom, school and system levels for individuals with exceptionalities. The gifted education specialist applies knowledge of:

5.067(7)(a).—programming services in order to:

5.067(7)(a)(i).—apply knowledge of cognitive science, learning theory and instructional technologies to improve instructional programs at the school- and system-wide level;

5.067(7)(a)(ii).—design and develop systematic program and curriculum models for enhancing talent development in multiple settings; and

5.067(7)(a)(iii).—implement knowledge of program strategies, such as acceleration and enrichment, and research regarding effective instructional strategies to services for gifted and/or talented students.

5.067(7)(b).—diversity in order to:

5.067(7)(b)(i).—apply knowledge of special populations of gifted and talented students in the development of appropriate program and instructional-delivery decisions based on the unique and varied characteristics and needs of such students including, but not limited to, early childhood students; twice-exceptional learners (i.e., gifted and talented students with disabilities); highly gifted students; underachieving, high-potential students; culturally and ethnically diverse students; students with unique affective needs and high-potential, economically disadvantaged students; and

5.067(7)(b)(ii).—apply understanding of the effects of cultural, social and economic diversity and variations of individual learners' differences to inform development of programs, supports and services for individuals with exceptional learning needs.

5.067(7)(c).—program evaluation in order to:

5.067(7)(c)(i).—implement strategies to conduct program/service evaluation for continued improvement;

- 5.067(7)(c)(ii) — design and implement research activities to evaluate the effectiveness of instructional practices and to assess progress toward the organizational vision, mission and goals of their programs;
- 5.067(7)(c)(iii) — develop procedures for continuous improvement management systems;
- 5.067(7)(c)(iv) — design and implement evaluation activities to improve programs, supports and services for individuals with exceptionalities;
- 5.067(7)(c)(v) — evaluate progress toward achieving the vision, mission and goals of programs, services and supports for individuals with exceptionalities;
- 5.067(7)(c)(vi) — prepare for, participate in and evaluate results from the Colorado Gifted Education Review (CGER) process and develop goals and next steps as reflected in the CGER Timeline and the Unified Improvement Plan, Gifted Addendum (UIP-Gifted); and
- 5.067(7)(c)(vii) — ensure that the district's gifted definition, identification process, programming options based on individual ALPs and assessments are aligned and effective in meeting gifted learner needs.

5.08 Special Education Generalist (Ages 5-21)

To hold an endorsement as a special education generalist, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved program for the preparation of special education generalists, including prescribed field experience and student teaching requirements; have passed the approved elementary education content and special education assessments; and have demonstrated the competencies specified below:

5.08(1) — The special education generalist is knowledgeable about research-based student literacy and the development of reading, writing, communicating and listening skills in order to provide specially designed instruction and facilitate access to the general education curriculum in a variety of settings and is able to:

5.08(1)(a) — plan and organize reading and writing instruction and interventions informed by a variety of ongoing student assessment.

5.08(1)(b) — use knowledge of typical and atypical language and cognitive development to guide the choice of instructional strategies and interventions in meeting the learning needs of individual students.

5.08(1)(c) — develop in students the phonological and linguistic skills related to reading, including, but not limited to, phonemic awareness, concepts of print, systematic explicit phonics and other word identification strategies to enhance vocabulary development and spelling instruction.

5.08(1)(d) — develop reading comprehension skills in students, including, but not limited to, comprehension strategies within a variety of genres, literary response and analysis and content area literacy and the promotion of independent reading.

5.08(1)(e) — increase oral and written English language arts skills and proficiency of students, including, but not limited to, the appropriate and correct use of vocabulary and standard English; punctuation; grammar; sentence structure and spelling; as well as an understanding of the relationship(s) between reading, writing and communicating and is further able to:

5.08(1)(e)(i) — design instruction and interventions based on the unique strengths and needs of students with disabilities to assist them in their acquisition of reading, writing and communicating skills;

5.08(1)(e)(ii) — apply a variety of effective evidence and/or research-based instructional strategies and curricular approaches to the teaching of reading and writing skills; and

5.08(1)(e)(iii) — match appropriate instructional strategies to student needs related to the acquisition of knowledge and skills in required content areas, such as reading, writing and communicating.

5.08(1)(f) — incorporate Colorado Academic Standards into instructional strategies and interventions for teaching reading, writing and communicating.

5.08(2) — The special education generalist is knowledgeable about mathematics and mathematics instruction and is able to collaborate and consult with content-area teachers in developing students' knowledge and skills in the use of number systems, number sense, geometry, measurement, statistics, probability, mathematical functions and the use of variables.

5.08(3) — The special education generalist is knowledgeable about standards and assessment, instructional strategies and interventions, planning practices, assessment techniques and appropriate adaptations to ensure student learning within a standards-aligned curriculum and is able to:

5.08(3)(a) — design short- and long-range standards-aligned instruction and intervention plans.

5.08(3)(b) — develop valid and reliable assessment tools for the classroom.

5.08(3)(c) — develop and utilize a wide variety of progress-monitoring tools.

5.08(3)(d) — develop and utilize a wide variety of informal and formal assessments, including, but not limited to, rubrics, and can:

5.07(3)(d)(i) — develop and utilize adapted assessment of student performance; and

5.07(3)(d)(ii) — communicate the strengths and limitations of a wide variety of formal and informal assessment tools; select and use these instruments in screening, pre-referral, referral and eligibility determination for special education and to guide instruction.

5.08(3)(e) — assess and evaluate the effects of a wide variety of teaching strategies and interventions on student performance related, but not limited to, academic standards as demonstrated by the special education generalist's ability to link appropriate adaptations of instructional strategies, interventions and assessments to student learner needs, based on evaluation(s) of those needs.

5.08(3)(f) — interpret and utilize assessment data in planning for standards-aligned instruction and incorporating scores, including grade score versus standard score, percentile ranks, age/grade equivalents and stanines, and is able to interpret and summarize the educational implications of these to relevant stakeholders.

5.08(3)(g) — provide effective and timely verbal and written feedback to students to guide and improve their academic performance related to meeting academic standards.

5.08(3)(h) — prepare students for the Colorado Measures of Academic Success (CMAS) and any other formal and informal assessments of academic achievement.

5.08(3)(i) — ensure that instruction is consistent with Colorado Academic Standards, Colorado accreditation requirements and school district and school priorities and objectives.

5.08(4) — The special education generalist is knowledgeable about the general academic content of and basic concepts related to civics, economics, foreign language, geography, history, science, music, visual arts and physical education in order to collaborate with the general classroom teacher to provide the adaptations necessary for students to access and learn the content areas and is able to:

5.08(4)(a) — analyze, critically review and incorporate effective documented evidence and/or research-based strategies and interventions into collaborative and/or consultative roles with other professionals as related to planning for instructional delivery to students.

5.08(4)(b) — collaborate and consult with other school professionals, families and students to assist learners in gaining access to learning accommodations that may be required for them to meet academic standards.

5.08(4)(c) — assist in the adaptation of student content acquisition through general knowledge of the concepts incorporated in the Colorado Academic Standards and by:

5.08(4)(c)(i) — identifying the unique strengths and needs of students with disabilities as related to acquisition of content, skills and knowledge;

5.08(4)(c)(ii) — employing a wide variety of approaches to assist in the adaptation of the teaching of content areas to support students in meeting the academic standards;

5.08(4)(c)(iii) — collaborating and consulting with content-area teachers in adapting curriculum and instruction to support students with disabilities in meeting Colorado Academic Standards; and

5.08(4)(c)(iv) — collaborating and consulting with other professionals in the design and implementation of instruction to meet the needs of learners from a wide variety of cultures and socio-economic backgrounds.

5.08(4)(d) — assist other educators in the enrichment and enhancement of content knowledge to extend student learning by demonstrating the ability to locate, analyze, select and apply evidence- and/or research-based best practices that have been proven to generate improved student outcomes.

5.08(4)(e) — collaborate or consult with the general education classroom teacher with the incorporation of research-based literacy and mathematics across content areas.

5.08(5) — The special education generalist is knowledgeable about classroom and instructional management and is able to demonstrate such practices as effective time management, communication and accurate and timely record-keeping in support of increased student learning and outcomes and is able to:

5.08(5)(a) — create a learning environment characterized by appropriate student behavior, efficient use of time and disciplined student acquisition of content knowledge, skills and the application thereof through:

5.08(5)(a)(i) — the provision of a safe and productive learning environment responsive to the physical, social, cognitive, academic, linguistic, cultural and functional needs of student learners;

5.08(5)(a)(ii) — the provision of information to general classroom teachers about effective classroom management practices and organizational techniques that address the needs of individual or groups of students with varying instructional needs;

5.08(5)(a)(iii) — the utilization of management and organizational techniques designed for students with differing needs and levels of needs;

5.08(5)(a)(iv) — evaluation to determine specific learner academic needs and to match student strengths with appropriate curriculum and instructional delivery strategies in an environment organized to encourage optimal learning;

5.08(5)(a)(v) — the design of behavior plans that incorporate evidence- and/or research-based instructional strategies into teaching about and the student acquisition of problem-solving, conflict resolution and social interaction skills; and

5.08(5)(a)(vi) — the creation of conditions and the teaching of skills that engage students as active participants in their own educational planning, including, but not limited to, goal-setting and goal attainment.

5.08(5)(b) — apply consistent and fair disciplinary practices in the classroom and demonstrate the ability to:

5.08(5)(b)(i) — maintain adequate and appropriate data regarding student behavior to determine whether student actions are a manifestation of a disability and/or to address such implication(s) in the expulsion process.

5.08(5)(b)(ii) — match classroom management and organizational techniques to the needs of groups of students.

5.08(5)(b)(iii) — apply effective evidence- and research-based classroom management and organizational techniques, including the implementation of positive behavior intervention support systems.

5.08(5)(b)(iv) — conduct and interpret functional behavioral assessments.

5.08(5)(b)(v) — develop and implement collaborative behavior support plans in cooperation with other team members, students and parents.

5.08(5)(b)(vi) — interpret, design and implement positive behavioral and intervention support systems based on data drawn from functional behavioral assessments.

5.08(5)(c) — apply appropriate intervention strategies and practices to ensure that an effective learning environment is maintained and is able to:

5.08(5)(c)(i) — provide information to general classroom teachers about how to evaluate and match specific learner needs and strengths with appropriate curriculum and instruction strategies to optimize student engagement and learning; and

5.08(5)(c)(ii) — implement a wide variety of effective research-based instructional strategies and explain the reasoning and purpose behind the implementation of specific teaching strategies.

5.08(5)(d) — raise the academic performance level of a group of students to a higher level over time.

5.08(5)(e) — teach strategies to improve cognitive processes associated with various kinds of learning, including but not limited to those related to critical and creative thinking; problem-structuring and problem-solving; invention; and memorization and recall and provide strategies to address each so that students are assisted in mastering academic standards through the educator's application of knowledge related to the 21st-century skills, cognitive, communication, physical, cultural, social, educational, self-determination, transitional and affective needs of all students, including those with disabilities.

5.08(5)(f) — Collaborate with teacher-librarians and/or other library personnel and resource specialists to instruct students on how to gain access to, retrieve, analyze, synthesize and evaluate information and to incorporate information-gathering literacy skills into curriculum delivery and into the enhancements of standards-aligned learning.

5.08(5)(g) — accurately assess, document and report ongoing student achievement in a timely and concise manner.

5.08(5)(h) — communicate effectively with parents, families or guardians to involve them as participants and partners in student learning by providing them information about resources and by assisting and encouraging families in their efforts to support the academic progress of the learner from within the home environment by addressing cultural, socio-economic and linguistic diversity issues and other life-affecting conditions.

5.08(5)(i) — communicate about a variety of assessment results and their implications for and to students, parents, guardians, professionals, administrators and the community;

5.08(5)(i)(i) — effectively interpret and communicate orally and in writing student assessment results to a variety of stakeholders, including, but not limited to, those involved in instructional and support services planning and delivery, students and their parents/guardians;

5.08(5)(i)(ii) — assist students in transferring and applying acquired knowledge and skills to home, community and work life;

5.08(5)(i)(iii) — assist students in their transition from one setting or level to another in collaboration with family, educators, other professionals and relevant community representatives as appropriate; and

5.08(5)(i)(iv) — identify and utilize resources and strategies that promote effective partnerships between students, families, school, district and other programs and the community.

5.08(6) — The special education generalist is knowledgeable about orientation of instruction toward meeting student need(s); responsive to the unique needs and experiences students bring to the classroom, including those based on culture, community, ethnicity, economics, linguistics, age-appropriateness and innate learning abilities; understands learning exceptionalities and conditions that affect the rate and extent of student learning and the adaptation of instruction for all learners and is able to:

5.08(6)(a) — employ a wide variety of teaching techniques to match the intellectual, emotional, physical and social level of each student and is able to select a wide variety of age-appropriate teaching strategies and materials to achieve different curricular purposes by:

5.08(6)(a)(i) — analyzing the unique strengths and needs of students with disabilities in relation to the learning process and life experience and planning and implementing instruction for appropriate student outcomes; and

5.08(6)(a)(ii) —incorporating and utilizing strategies that mitigate the influence of diversity on assessment, eligibility, programming, accessibility and placement of students with exceptional learning needs.

5.08(6)(b) —assist in the design and/or adaptation of standards-aligned instructional delivery in response to identified student need, including that of exceptional learners and of English language acquisition learners, and can effectively collaborate and consult with other professionals to:

5.08(6)(b)(i) —develop and provide appropriate curriculum, instruction and interventions that meet the unique needs of students with disabilities; and

5.08(6)(b)(ii) —gain access to services that meet the needs of learners and families from a variety of cultures.

5.08(6)(c) —incorporate knowledge about the effect of educational disabilities and giftedness on student learning to optimize and individualize instruction and to assist in planning for students' transition to post-school and work life.

5.08(6)(d) —follow procedures specified in state, federal and local regulation and policy and can:

5.08(6)(d)(i) —identify and provide pre-referral intervention(s) to determine the least restrictive learning environment for a student, whether in special or general education setting(s), as determined by the special education assessment process;

5.08(6)(d)(ii) —communicate to a variety of stakeholders about the applicable history and foundations of federal, state and local policy and the legal requirements that provide the basis for special education and its practice(s);

5.08(6)(d)(iii) —communicate effectively to a variety of stakeholders about the procedural safeguards inherent in due process rights as related to assessment, eligibility and placement;

5.08(6)(d)(iv) —communicate to a variety of stakeholders about the rights and responsibilities of parents, students with disabilities, teachers, other professionals and schools as related to special education;

5.08(6)(d)(v) —make ethical decisions with regard to identification, assessment, instructional and service delivery for students in special education; and

5.08(6)(d)(vi) —coordinate, schedule and supervise para-educators to ensure that students' education programs are implemented effectively.

5.08(6)(e) —develop and implement mandated and other individualized education programs related, but not limited, to:

5.08(6)(e)(i) —student education, behavior and transition in collaboration with parents and families, students and other education professionals; and

5.08(6)(e)(ii) —measurable goals, objectives and adaptations based on student need.

5.08(6)(f) —collect and utilize data on student achievement, incorporated into the development of individualized education plans (IEPs) and be able to:

5.08(6)(f)(i) — assess and report progress regarding student attainment of annual goals and/or objectives; and

5.08(6)(f)(ii) — modify student plans in a timely way based on student data.

5.08(6)(g) — collaborate and consult with other professionals on the development of a student education plan with regard to strategies that may be applied when a medical condition or medication must be considered in terms of its current or potential effect on a student's learning and/or behavior.

5.08(7) — The special education generalist is knowledgeable about and skilled in technology and its instructional applications, the use(s) of technology in support of instruction delivery and the enhancement of student learning and is able to:

5.08(7)(a) — collaborate and consult with the general education teacher with regard to the multiple use(s) of technology in the delivery of standards-aligned instruction.

5.08(7)(b) — incorporate technology to increase student achievement by utilizing:

5.08(7)(b)(i) — assistive technology to support communication in collaboration or consultation with, and utilizing the expertise of, other skilled/trained professionals; and

5.08(7)(b)(ii) — current educational and assistive technologies to meet the instructional needs of students with disabilities.

5.08(7)(c) — utilize technology to manage student education programs and to communicate relevant information to a wide variety of stakeholders.

5.08(7)(d) — apply technology to data-driven assessment(s) of learning.

5.08(7)(e) — instruct, or ensure instruction of, and support students with disabilities in their acquisition of technology skills according to need(s), level(s) of learning and requirements for assistive technology.

5.08(8) — The special education generalist is knowledgeable about the relationship of education to democracy, including, but not limited to, the school's role in teaching and perpetuating a democratic system of government; educational governance; careers in teaching and the relationship(s) between the various governmental entities that create laws, rules, regulations and policies that determine education and special education practices and is able to:

5.08(8)(a) — model and articulate democratic ideals to students and other stakeholders as related, but not limited to:

5.08(8)(a)(i) — teaching about productive citizenship; and

5.08(8)(a)(ii) — teaching and perpetuating the principles of a democratic republic.

5.08(8)(b) — model for and develop in students positive and accepted behavior(s) to accepted standards and respect for the rights of others as necessary for successful personal, family and community involvement and well-being.

5.08(8)(c) — demonstrate respect for and effectively address in planning the influences that affect educational practice, including, but not limited to:

5.08(8)(c)(i) — federal and state constitutional provisions;

~~5.08(8)(c)(ii) — federal and state executive, legislative and legal policies;~~

~~5.08(8)(c)(iii) — the roles of elected officials in policy-making;~~

~~5.08(8)(c)(iv) — local board of education, school district and school administration policies and those of boards of cooperative services;~~

~~5.08(8)(c)(v) — the influence of nontraditional and nonpublic schools, including charter schools, private schools and home schooling; and~~

~~5.08(8)(c)(vi) — public sector input from business, advocacy groups and the public.~~

~~5.08(8)(d) — promote teaching as a worthy career and describe the wide variety of career paths in education.~~

~~5.08(8)(e) — self-evaluate performance and participate in professional development options and organizations that can improve that performance.~~

5.09 5.02 — Early Childhood Special Education (Ages Birth-8)

~~To be endorsed in early childhood special education, for ages birth-8, an applicant must hold a bachelor's or higher degree from a four-year accepted institution of higher education; have completed an approved program in early childhood special education, that includes student teaching and practicum; have demonstrated the competencies found at 9.00 of the rules for the Administration of the Educator Licensing Act of 1991; have demonstrated the foundational knowledge and skills necessary for working with young children found in 4.01 of these rules; and have demonstrated the additional competencies specified below:~~

~~Colorado's Competencies for Early Childhood Educators and Administrators and Colorado Educator licensing rules at 4.01 for early childhood educators represent the universal level/foundational knowledge and skills necessary for working with young children.~~

~~These early childhood special education rules standards at 5.09 are at the targeted, intensive, and specialized level for educators working with children with disabilities and exceptional needs. The Council for Exceptional Children (CEC) Specialty Set: Early Childhood and Early Intervention Special Education (ECSE) (2015) Early Interventionist/Early Childhood Special Educator (EI/ECSE) Standards (2020) were adopted adapted for 5.09 licensing these endorsement standards.rules.~~

~~5.09(1) 5.02(1) Learner development and individual learning differences (builds upon rule 4.01(1)(b)):~~
~~Beginning early childhood special education professionals understand how exceptionalities may interact with development and learning and use this knowledge to provide meaningful and challenging learning experiences for individuals with exceptionalities.~~

~~5.09(1)(a) — 5.02(1)(a) Beginning early childhood special education professionals are demonstrate knowledge knowledgeable of:~~

~~5.09(1)(a)(i) — 5.02(1)(a)(i) the impact that different theories and philosophies of typical and atypical early learning and childhood development; have on assessment, curriculum, intervention and instruction decisions;~~

~~5.09(1)(a)(ii) — 5.02(1)(a)(ii) biological and environmental factors that affect pre-, peri- and postnatal may support or constrain children's early development and learning as they plan and implement early intervention and instruction;~~

5.09(1)(a)(iii) — ~~5.02(1)(a)(iii) specific disabilities, including the etiology, characteristics, etiologies and individual differences within and across the range of abilities, including development delays and classification of common disabilities, in infants and young children, and specific implications for and their potential impact on children's early development and learning; and in the first years of life;~~

5.09(1)(a)(iv) — ~~5.02(1)(a)(iv) impact of medical conditions and related care on development and learning; normative sequences of early development, individual differences and families' social and cultural linguistic diversity to support each child's development and learning across contexts;~~

5.09(1)(a)(v) — factors that affect the mental health and social-emotional development of infants and young children;

5.09(1)(a)(vi) — infants and young children develop and learn at varying rates;

5.09(1)(a)(vii) — impact of child's abilities, needs and characteristics on development and learning;

5.09(1)(a)(viii) — impact of language delays on cognitive, social-emotional, adaptive, play, temperament and motor development; and

5.09(1)(a)(ix) — impact of language delays on behavior.

5.09(1)(b) — ~~5.02(1)(b) Beginning early childhood special education professionals demonstrate the skills to:~~

5.09(1)(b)(i) — develop, implement and evaluate learning experiences and strategies that respect the diversity of infants and young children and their families;

5.09(1)(b)(ii) — ~~5.02(1)(b)(i) develop and match learning experiences and strategies to characteristics of infants and young children;~~

5.09(1)(b)(iii) — ~~5.02(1)(b)(ii) support and facilitate family and child interactions as primary contexts for development and learning; identify systematic, responsive and intentional evidence-based practices and use these practices with fidelity to support young children's learning and development across all developmental and content domains; and~~

5.09(1)(b)(iv) — support caregivers to respond to a child's cues and preferences; establish predictable routines and turn-taking, and facilitate communicative initiations; and

5.09(1)(b)(v) — ~~5.02(1)(b)(iii) establish communication systems for young children that support self-advocacy, including the use of assistive technology for young children who are deaf and/or hard of hearing.~~

5.09(2) ~~5.02(2) Learning environments and instructional planning and strategies (builds upon rule 4.01(4) and 4.01(8))~~ 4.01(8)(a) and 4.01(4)(a): Beginning early childhood special education professionals create safe, inclusive, culturally responsive learning environments and select, adapt and use a repertoire of evidence-based instructional strategies to advance the learning of so that individuals with exceptionalities, become active and effective learners and develop emotional well-being, positive social interactions and self-determination.

5.09(2)(a) — Beginning early childhood special education professionals are knowledgeable of the impact of social and physical environments on development and learning.

5.09(2)(b) — 5.02(2)(a) Beginning early childhood special education professionals demonstrate the skills to:

5.09(2)(b)(i) — 5.02(2)(a)(i) select, develop, and evaluate developmentally and functionally appropriate materials, equipment and environments; engage in ongoing planning and use flexible and embedded instructional and environmental arrangements and appropriate materials to support the use of interactions, interventions and instruction addressing the development and academic content domains, which are adapted to meet the needs of each child and their family;

5.09(2)(b)(ii) — 5.02(2)(a)(ii) organize space, time, materials, peers and adults to maximize progress in natural and structured environments; use responsive interactions, interventions and instruction with sufficient intensity and types of support across activities, routines and environments to promote child learning and development and facilitate access, participation and engagement in natural environments and inclusive settings;

5.09(2)(b)(iii) — 5.02(2)(a)(iii) embed learning opportunities in everyday routines, relationships, activities and places; plan for, adapt and improve approaches to interactions, interventions and instruction based on multiple sources of data across a range of natural environments and inclusive settings;

5.02(2)(a)(iv) use technologies to support instructional assessment, planning and delivery for individuals with exceptionalities;

5.02(2)(a)(v) identify and create multiple opportunities for young children to develop and learn play skills and engage in meaningful play experiences independently and across contexts;

5.02(2)(a)(vi) promote young children's social and emotional competence and communication and proactively plan and implement function-based interventions to prevent and address challenging behaviors;

5.09(2)(b)(iv) — 5.02(2)(a)(iv) structure, social environments, using peer models, proximity and responsive adults to promote interactions among peers, parents and caregivers; direct and support the activities of para-educators, volunteers and tutors;

5.09(2)(b)(v) — 5.02(2)(a)(v) provide a stimulus-rich indoor and outdoor environment that employs materials, media and adaptive and assistive technology, responsive to individual differences; intervene safely and appropriately with individuals with exceptionalities in a crisis; and

5.09(2)(b)(vi) — 5.02(2)(a)(vi) use universal precautions, implement basic health, nutrition and safety management procedures for infants and young children; and

5.09(2)(b)(vii) — use evaluation procedures and recommend referral with ongoing follow-up to community health and social services.

5.09(3) 5.02(3) Curricular content knowledge (builds upon rule 4.01(8)): Beginning early childhood special education professionals use knowledge of general and specialized curricula to individualize learning for individuals with exceptionalities.

5.09(3)(a) — Beginning early childhood special education professionals are knowledgeable of:

5.09(3)(a)(i) — ~~concepts of universal design for learning; early childhood curriculum frameworks, developmental and academic content knowledge and related pedagogy to plan and ensure equitable access to universally designed, developmentally appropriate and challenging learning experiences in natural and inclusive environments.~~

5.09(3)(a)(ii) — theories and research that form the basis of developmental and academic curricula and instructional strategies for infants and young children; and

5.09(3)(a)(iii) — developmental and academic content.

5.09(3)(b) — ~~5.02(3)(b)~~ Beginning early childhood special education professionals demonstrate the skills to:

5.09(3)(b)(i) — ~~5.02(3)(b)(i)~~ apply current research to the five developmental domains; play and temperament in learning situations; ~~collaborate with families and other professionals to identify an evidence-based curriculum addressing developmental and content domains to design and facilitate meaningful and culturally responsive learning experiences that support the unique abilities and needs of all children and families; and~~

5.09(3)(b)(ii) — ~~5.02(3)(b)(ii)~~ plan, implement and evaluate developmentally appropriate curricula, instruction and adaptations based on knowledge of individual children, the family and the community; ~~engage in ongoing reflective practice and access evidence-based information to improve their own practices.~~

5.09(3)(b)(iii) — implement and evaluate preventative and reductive strategies to address challenging behaviors; and

5.09(3)(b)(iv) — plan and implement developmentally and individually appropriate curriculum.

5.09(4) ~~5.02(4)~~ Assessment (builds upon rule 4.01(2)): Beginning early childhood special education professionals use multiple methods of assessment and data sources in making educational decisions.

5.09(4)(a) — ~~5.02(4)(a)~~ Beginning early childhood special education professionals are knowledgeable of the:

5.09(4)(a)(i) — ~~5.02(4)(a)(i)~~ role of the family in the assessment process; ~~purposes of formal and informal assessment, including ethical and legal considerations, and use this information to choose developmentally, culturally and linguistically appropriate, valid, reliable tools and methods that are responsive to characteristics of the young child, family and program;~~

5.09(4)(a)(ii) — ~~5.02(4)(a)(ii)~~ legal requirements that distinguish among at-risk, developmental delay and disability; ~~process for developing and administering informal assessments and/or selecting and using valid, reliable formal assessments that use evidence-based practices, including technology, in partnership with families and other professionals;~~

5.09(4)(a)(iii) — ~~5.02(4)(a)(iii) alignment of assessment with curriculum, content standards and local, state and federal regulations; and process for exiting children from special education when appropriate; and~~

5.09(4)(a)(iv) — ~~5.02(4)(a)(iv) connection of curriculum to assessment and progress monitoring activities; the data collection for federal OSEP reporting requirements (entries and exits to early childhood special education) and the need for collaboration with general education early childhood educators to support this data collection.~~

5.09(4)(b) — ~~5.02(4)(b) Beginning early childhood special education professionals demonstrate the skills to:~~

5.09(4)(b)(i) — ~~5.02(4)(b)(i) assist families in identifying their concerns, resources and priorities; analyze, interpret, document and share assessment information using a strength-based approach with families and other professionals; and~~

5.09(4)(b)(ii) — ~~5.02(4)(b)(ii) integrate family priorities and concerns in the assessment process; collaborate with families and other team members to use data to determine eligibility, develop child and family-based outcomes and goals, plan for interventions and instruction, and monitor progress to determine efficacy of programming.~~

5.09(4)(b)(iii) — ~~assess progress in the five developmental domains, play and temperament;~~

5.09(4)(b)(iv) — ~~select and administer assessment instruments in compliance with established criteria;~~

5.09(4)(b)(v) — ~~use informal and formal assessment to make decisions about infants' and young children's development and learning;~~

5.09(4)(b)(vi) — ~~gather information from multiple sources and environments;~~

5.09(4)(b)(vii) — ~~use a variety of materials and contexts to maintain the interest of infants and young children in the assessment process;~~

5.09(4)(b)(viii) — ~~participate as a team member to integrate assessment results in the development and implementation of individualized plans;~~

5.09(4)(b)(ix) — ~~emphasize child's strengths and needs in assessment reports;~~

5.09(4)(b)(x) — ~~produce reports that focus on developmental domains and functional concerns; and~~

5.09(4)(b)(xi) — ~~conduct ongoing formative child, family and setting assessments to monitor instructional effectiveness.~~

5.09(5) Instructional planning and strategies (builds upon rule 4.01(8)): Beginning early childhood special education professionals select, adapt, and use a repertoire of evidence-based instructional strategies to advance learning of individuals with exceptionalities.

5.09(5)(a) — Beginning early childhood special education professionals demonstrate the skills to:

5.09(5)(a)(i) — ~~facilitate child-initiated development and learning;~~

5.09(5)(a)(ii) — use teacher-scaffolded and -initiated instruction to complement child-initiated learning;

5.09(5)(a)(iii) — link development, learning experiences and instruction to promote educational transitions;

5.09(5)(a)(iv) — use individual and group guidance and problem-solving techniques to develop supportive relationships with and among children;

5.09(5)(a)(v) — use strategies to teach social skills and conflict resolution;

5.09(5)(a)(vi) — use a continuum of intervention strategies to support access of young children in the general curriculum and daily routines;

5.09(5)(a)(vii) — develop, implement and evaluate individualized plans with family members and other professionals as a member of a team;

5.09(5)(a)(viii) — design intervention strategies incorporating information from multiple disciplines;

5.09(5)(a)(ix) — implement developmentally and functionally appropriate activities, using a variety of formats, based on systematic instruction;

5.09(5)(a)(x) — align individualized goals with developmental and academic content;

5.09(5)(a)(xi) — develop individualized plans that support development and learning as well as caregiver responsiveness;

5.09(5)(a)(xii) — develop an individualized plan that supports the child's independent functioning in the child's natural environments; and

5.09(5)(a)(xiii) — make adaptations for the unique developmental and learning needs of children, including those from diverse backgrounds.

5.09(6) ~~5.02(5)~~ Professional learning and ethical practice (builds upon rule 4.01(6)): Beginning early childhood special education professionals use foundational knowledge of the field and the their professional ethical principles and practice standards to inform early childhood special education practice, to engage in lifelong learning, and to advance the profession.

5.09(6)(a) — ~~5.02(5)(a)~~ Beginning early childhood special education professionals are knowledgeable of: trends and issues in early childhood education, early childhood special education and early intervention and practice in accordance with ethical and legal policies and procedures.

5.09(6)(a)(i) — historical, philosophical foundations and legal basis of services for infants and young children both with and without exceptional needs;

5.09(6)(a)(ii) — trends and issues in early childhood education, early childhood special education and early intervention;

5.09(6)(a)(iii) — legal, ethical and policy issues related to educational, developmental and medical services for infants, young children and their families; and

5.09(6)(a)(iv) — advocacy for professional status and working conditions for those who serve infants, young children and their families.

5.09(6)(b) — ~~5.02(5)(b)~~ Beginning early childhood special education professionals demonstrate the skills to:

~~5.02(5)(b)(i) advocate for improved outcomes for young children, families and the profession, including the promotion and use of evidence-based practices and decision-making;~~

5.09(6)(b)(i) — ~~5.02(5)(b)(ii)~~ recognize signs of emotional distress, neglect and abuse, and follow reporting procedures;

5.09(6)(b)(ii) — ~~5.02(5)(b)(iii)~~ integrate family systems theories and principles into professional practice; ~~implement the level of support needed by the family to achieve the desired outcomes for the child;~~

5.09(6)(b)(iii) — ~~5.02(5)(b)(iv)~~ respect family choices and goals; ~~fully understand procedural safeguards and ensure families understand them and are part of the decision-making;~~

5.09(6)(b)(iv) — participate in activities of professional organizations relevant to early childhood special education and early intervention;

5.09(6)(b)(v) — apply evidence-based and recommended practices for infants and young children including those from diverse backgrounds;

5.09(6)(b)(vi) — advocate on behalf of infants, young children and their families; and

5.09(6)(b)(vii) — ~~5.02(5)(b)(v)~~ implement family services consistent with due process safeguards.;

~~5.02(5)(b)(vi) serve as a model for individuals with exceptionalities;~~

~~5.02(5)(b)(vii) conduct professional activities in compliance with applicable laws and policies; and~~

~~5.02(5)(b)(viii) engage with the early intervention/early childhood special education profession by participating in local, regional, national and/or international activities and organizations~~

5.09(7) ~~5.02(6)~~ Collaboration (builds upon rule 4.01(3)): Beginning early childhood special education professionals collaborate with families, other educators, related service providers, individuals with exceptionalities and personnel from community agencies in culturally responsive ways to address the needs of individuals with exceptionalities across a range of learning experiences.

5.09(7)(a) — Beginning early childhood special education professionals are knowledgeable of structures supporting interagency collaboration, including interagency agreements, referral and consultation.

5.09(7)(b) — ~~5.02(6)(a)~~ Beginning early childhood special education professionals demonstrate the skills to:

5.09(7)(b)(i) — ~~5.02(6)(a)(i)~~ apply teaming models, skills and processes and appropriate uses of technology when collaborating and communicating with families, professionals with varying skills, expertise and roles across multiple disciplines, community partners and agencies; of team process in early childhood;

~~5.09(7)(b)(ii) — 5.02(6)(a)(ii) collaborate with caregivers, professionals and agencies to support children's development and learning; use a variety of evidence-based, collaborative strategies when working with adults that are culturally and linguistically responsive and appropriate to the task, the environment and service delivery approach;~~

~~5.09(7)(b)(iii) — 5.02(6)(a)(iii) support families' choices and priorities in the development of goals and intervention strategies; partner with families and other professionals to develop individualized plans and support the various transitions that occur for the child and their family throughout the birth-8 age span;~~

~~5.09(7)(b)(iv) — 5.02(6)(a)(iv) implement family-oriented services based on the family's identified resources, priorities and concerns; apply family-centered practices, family systems theory and knowledge of the changing needs and priorities in families' lives to develop trusting, respectful, affirming and culturally responsive partnerships with all families to allow for the mutual exchange of knowledge and information;~~

~~5.09(7)(b)(v) — 5.02(6)(b)(v) provide consultation in setting serving infants and young children; engage in reciprocal partnership with families and other professionals to facilitate responsive adult-child interactions, interventions and instruction in support of child learning and development;~~

~~5.09(7)(b)(vi) — 5.02(6)(b)(vi) involve engage families in evaluation of services; identifying their strengths, priorities and concerns; and~~

~~5.09(7)(b)(vii) — 5.02(6)(b)(vii) participate as a team member to identify and enhance team roles, communication and problem-solving; promote families' competence and confidence during assessment, individualized planning, intervention and transition processes to support their goals for their family and young child's development and learning;~~

~~5.09(7)(b)(viii) — employ adult learning principles in consulting and training family members and service providers;~~

~~5.09(7)(b)(ix) — assist the family in planning for transition; and~~

~~5.09(7)(b)(x) — implement processes and strategies that support transitions among settings for infants and young children.~~

6.0 Graduate Endorsements

The following shall serve as standards for endorsements requiring the completion of graduate-level academic degrees and/or programs. All endorsement standards must be reviewed as needed for continuing appropriateness, applicability and benefit to Colorado students and schools.

6.01 (Rule number reserved.)

6.02 Teacher-Librarian (grades K-12)

To be endorsed as a teacher-librarian, an applicant must hold an earned bachelor's degree from an accepted institution of higher education; hold a Colorado initial or professional teacher license; have completed an approved program in library science or the equivalent, including field work in diverse K-12 settings and grade levels and a supervised practicum or internship that includes both elementary and secondary school library experience (the practicum or internship may be waived by the accepted

institution upon comparable teacher-librarian experience as determined by the educator preparation program); and have demonstrated knowledge and performance competency, including, but not limited to, those listed below:

6.02(1) Quality standard 1: mastery and pedagogical instruction – A teacher demonstrates mastery of and pedagogical expertise in the content area(s) taught. The elementary teacher is an expert in research-based literacy and mathematics and is knowledgeable in all other content areas taught (e.g., science, social studies, the arts, physical education or world languages). The secondary teacher has knowledge of research-based literacy and mathematics and is an expert in specific content area(s) (CDE Model Teacher Evaluation System). A candidate for a teacher librarian endorsement demonstrates skills to implement the principles of effective teaching and learning that contribute to an active, inquiry- and standards-based approach to learning. The candidate develops lessons that reflect the interconnectedness of content areas/disciplines and makes use of a variety of instructional strategies and assessment tools to design and develop learning experiences in partnership with classroom teachers and other educators (AASL).

6.02(1)(a) Instructional pedagogy – The candidate employs inquiry-based instructional design including differentiated instruction to reach all learners. The candidate is also knowledgeable in designing and delivering learning instruction along with technology literacy, information literacy and digital citizenship that empowers K-12 students to be workforce ready.

6.02(1)(b) Instructional design – The candidate is knowledgeable about leadership techniques for facilitating a standards-based backward design process for authentic, active learning lessons and units. The candidate provides an environment where students can practice and learn new strategies and receive feedback while learning content and demonstrating understanding.

6.02(1)(c) Children's and young adult literature reading promotion – The candidate promotes reading for children, young adults and other education professionals through the use of high-quality, high-interest literature in print and digital formats that reflect diverse developmental, cultural, social and linguistic needs of K-12 students and communities. The candidate is aware of current trends in literature and displays the ability to work within the school-wide culture to foster curiosity in student and staff learners. The candidate is knowledgeable about a variety of innovative formats to teach, enrich and expand critical, creative and independent thinking.

6.02(1)(d) Research-based Literacy strategies – The candidate demonstrates knowledge of research-based reading strategies including reading fluency and reading comprehension to increase students' reading levels, developmental abilities and personal interests. The candidate demonstrates the importance of systematic and explicit reading development tied to the overall school goals for literacy development in students.

6.02(2) Quality standard 2: safe, inclusive, respectful environment – A teacher establishes safe, inclusive and respectful learning environments for a diverse population of students.

6.02(2)(a) Respect for diversity – The candidate demonstrates the ability to develop a collection of reading and information materials in print and digital formats that support the diverse developmental, cultural, social and linguistic needs of K-12 students and their communities.

6.02(2)(b) Equitable access – The candidate demonstrates the ability to develop solutions for addressing physical, social and intellectual barriers to equitable access to resources and services. The candidate works with the school administration team to allow for collaboration and flexibility to be able to teach at point of need. The candidate allows for and supports flexibility so that the library is available during and after school hours for

students, teachers, parents and the community. The candidate demonstrates the ability to develop and support 24/7 access to learning resources.

6.02(3) Quality standard 3: plan and deliver effective instruction – A teacher plans and delivers effective instruction and creates environments that facilitate learning for students (CDE Model Teacher Evaluation System).

6.02(3)(a) Collaboration in planning and teaching -- The candidate demonstrates the ability to work with other teachers from a variety of disciplines and grade levels to systematically integrate Colorado Academic Standards skills. The candidate develops a collaborative culture and demonstrates the ability to model for students how to work collaboratively with one another and provide evidence of new thinking and learning.

6.02(3)(b) Technology integration – The candidate is knowledgeable in recommending current and meaningful use of technology and is part of school-level technology discussions. The candidate models a classroom that integrates skills from the Colorado Academic Standards (i.e., critical thinking, invention, information literacy and digital citizenship) through the use of innovative technology strategies. The candidate demonstrates the ability to utilize a variety of current technology tools in the classroom and to incorporate emerging tools as they become available, as well as the ability to have a digital presence within their schools and learning communities.

6.02(3)(c) Assessment of learning – The candidate demonstrates the ability to develop consistent means of assessing how well students are acquiring essential skills and knowledge through the use of formative or summative assessments such as rubrics, checklists and journaling.

6.02(3)(d) Learning environment – The candidate demonstrates the ability to create and maintain a flexible, dynamic learning environment with the goal of producing successful learners skilled in multiple literacies.

6.02(3)(e) Collection development – The candidate demonstrates the ability to develop and implement policies in collaboration with district and appropriate school personnel for collection development/selection, weeding criteria and the reconsideration of challenged resources, with procedures used to defend the challenged material, that is consistent with the mission, goals and objectives of the school building and school district, through:

6.02(3)(e)(i) materials acquisition and organization – The candidate demonstrates the ability to select a balanced collection of digital and print resources that meet the diverse curricular, personal and professional needs of students, teachers and administrators. The candidate demonstrates the ability to organize collections for easy access, one that aligns to curriculum, meets independent reading needs and reflects diverse points of view;

6.02(3)(e)(ii) resource review – The candidate identifies and provides support for diverse student information needs. The candidate models multiple strategies for students, other teachers and administrators to locate, evaluate and ethically use information for specific purposes. The candidate collaborates with students, other teachers and administrators to efficiently access, interpret and communicate information; and

6.02(3)(e)(iii) materials deselection – The candidate regularly weeds the collection to create a viable and current collection for an aesthetically pleasing environment designed to meet the diverse curricular, personal and professional needs of students, teachers and administrators.

- 6.02(3)(f) Program management – The candidate designs strong library programs with resources, services, policies, procedures and programming that are aligned with the school's goals. The candidate demonstrates the ability to practice the ethical principles of their profession, advocate for intellectual freedom and privacy, and promote and model digital citizenship and responsibility. The candidate educates the school community on the ethical use of information and ideas.
- 6.02(3)(g) Supervision – The candidate demonstrates knowledge of the ability to recruit, supervise and evaluate library staff and volunteers.
- 6.02(3)(h) Budget management – The candidate demonstrates the ability to prepare, justify and maintain the school library program budget to ensure funding for the continuous acquisition of standards-based curriculum materials and services. The candidate displays the knowledge to pursue school-aligned alternative funding sources (such as grants or sponsorships) at the local, state and national level to enhance library funding and general program support.
- 6.02(3)(i) Program analysis/advocacy – The candidate uses evidence-based action research to collect data. The candidate interprets and uses data to create and share new knowledge to improve practice in school libraries. The candidate shows the ability to manage, organize and evaluate school library physical resources (facilities), fiscal resources (budgets) and human resources (personnel) to ensure the school library program recognizes, celebrates and advocates for the curricular, personal and professional needs of all stakeholders.
- 6.02(4) Quality standard 4: reflect on practice –A teacher reflects on personal teaching practice (CDE Model Teacher Evaluation System).
 - 6.02(4)(a) Strategic planning – The candidate displays the leadership skills to develop school-aligned yearly goals (growth plans, action plans, etc.) as a guide to creating a library program and instruction that positively impacts student achievement and helps students thrive in today's society. The candidate demonstrates the ability to effectively use feedback and data to measure implementation of yearly growth plan goals. The candidate makes effective use of data and information to assess how the library program addresses the needs of diverse communities.
 - 6.02(4)(b) Lifelong learning – The candidate plans for ongoing professional growth and know-how to articulate a personal learning network:
 - 6.02(4)(b)(i) instructional/digital coach – The candidate displays the ability to work directly and indirectly with teachers, staff and the building principal(s) to improve the effectiveness of classroom instruction and increase student learning, performance and overall achievement especially in the areas of technology skills and digital literacy (information literacy, technology literacy and digital citizenship); and
 - 6.02(4)(b)(ii) professional development – The candidate demonstrates the ability to be an instructional leader who develops and leads a variety of technology professional development opportunities (aligned with school's goals) for staff.
- 6.02(5) Quality standard 5: leadership and professional learning – A teacher demonstrates leadership (CDE Model Teacher Evaluation System).
 - 6.02(5)(a) Development and/or leading professional learning networks (PLN's) –The teacher-librarian educator shall self-assess effectiveness based on student achievement and

pursue continuous professional development in a variety of ways (e.g. digitally, in-person and networking) through appropriate activities, coursework and participation in relevant professional organizations.

- 6.02(5)(b) Family and community engagement – The candidate understands the importance of partnering with families to coordinate learning between home and school and advocates for the inclusion of teachers and families in education and government decision-making processes.

6.03 Adapted Physical Education (Ages 3-21)

To be endorsed in adapted physical education, an applicant must hold a Colorado initial or professional license with a physical education endorsement; have completed an approved graduate-level program in adapted physical education for school-aged children, including a 200-hour practicum across elementary and secondary grade levels; and have demonstrated the competencies below:

- 6.03(1) The adapted physical education educator has a strong foundational knowledge of the major theories, concepts and research pertaining to:

6.03(1)(a) human growth and development and its unique application to students with disabilities including;

6.03(1)(a)(i) the principles behind how motor skills are learned and developed;

6.03(1)(a)(ii) advanced motor development, gross motor skills and patterns, physical and motor fitness, and the physiological and biomechanical applications for students with disabilities; and

6.03(1)(a)(iii) psychomotor, cognitive and affective learning outcomes of physical education;

6.03(1)(b) the disability categories and other impairments and their effect on typical development including;

6.03(1)(b)(i) the specific learning styles, contraindications and medical implications associated with different disabilities;

6.03(1)(b)(ii) communication styles of students with disabilities, including those who are nonverbal or have limited verbal expression, and the use of assistive technology; and

6.03(1)(b)(iii) the unique social-emotional attributes of students with disabilities and their effect on peer interaction and participation;

6.03(1)(c) the needs and characteristics of students with disabilities and the developmental challenges that can prevent them from participating in physical education exercises and activities including;

6.03(1)(c)(i) the use of and safety concerns related to specialized equipment used by students with disabilities;

6.03(1)(c)(ii) the social implications and impact the use of such equipment has on the student, educator and classroom environment; and

6.03(1)(d) creating safe, engaging and inclusive environments for all students to receive services, support and instruction in the least restrictive environment.

- 6.03(2) The adapted physical education educator is knowledgeable about the importance of student evaluation, and the administration and use of standardized and/or criterion-referenced instruments for assessing and determining the current level of motor performance in students with disabilities via:
- 6.03(2)(a) fitness and motor skills tests, reflex and perceptual inventories, motor development profiles and direct measures;
 - 6.03(2)(b) the comparison of norm-referenced and criterion-reference assessments;
 - 6.03(2)(c) formal and informal methods for gathering both qualitative and quantitative data on motor performance, physical fitness, play, recreation, leisure and sports concepts and skills; and
 - 6.03(2)(d) effective and appropriate reporting and communication about assessment results to all members of the individualized education program (IEP) team.
- 6.03(3) The adapted physical education educator is knowledgeable about the professional, legal and ethical practices of adapted physical education and:
- 6.03(3)(a) understands federal and state special education laws and other regulations that govern adapted physical education in the state of Colorado, including:
 - 6.03(3)(a)(i) the IEP development process and implementation;
 - 6.03(3)(a)(ii) eligibility requirements for adapted physical education services;
 - 6.03(3)(a)(iii) the adapted physical education educator's role in the IEP process and data collection for progress monitoring; and
 - 6.03(3)(b) conducts himself in an ethical manner when providing programs and services for students with disabilities.
- 6.03(4) The adapted physical education educator is knowledgeable about the methodology of teaching and engaging students with disabilities and able to:
- 6.03(4)(a) advocate for and effectively implement appropriate instructional strategies, adaptations and accessibility for attaining individualized, measurable goals for students with disabilities using safe and developmentally appropriate physical education in a variety of settings, related to:
 - 6.03(4)(a)(i) behavior management;
 - 6.03(4)(a)(ii) equipment development and adaptation (e.g., modifications and/or accommodations);
 - 6.03(4)(a)(iii) unified physical education, reverse inclusion and team and/or co-teaching; and
 - 6.03(4)(a)(iv) research- and evidence-based practice;
 - 6.03(4)(b) collaborate and consult with other instructors and service providers, family members and community-based organizations;
 - 6.03(4)(c) develop and implement extracurricular athletic programs and interscholastic adapted sports programs for students with disabilities; and

6.03(4)(d) implement sequential and continuous transition planning for students with disabilities to ensure postsecondary and workforce readiness, successful transition to adulthood, and enhance the student's ability to incorporate appropriate fitness and wellness activities across the student's lifespan.

6.03(5) The adapted physical education educator is knowledgeable about the cultural values of students with disabilities and able to demonstrate and effectively instruct these students about:

6.03(5)(a) the activities specified in section 4.16 of these rules;

6.03(5)(b) movement opportunities and sport and recreation options outside the classroom for lifelong wellness, including intramural and lifetime sports and community-based support services and funding;

6.03(5)(c) emotional regulation; and

6.03(5)(d) social skills, identity, self-advocacy and acceptance of self and peers.

6.03(6) The adapted physical education educator shall self-assess the effectiveness of instruction and practice based on their students with disabilities' achievement and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.

6.04 Reading Specialist (Grades K-12)

To be endorsed as a reading specialist, an applicant must hold a Colorado initial or professional teacher license hold a master's or higher degree in reading; have completed an approved graduate program for the preparation of reading specialists at an accepted institution of higher education, including a supervised practicum or internship as a reading specialist; have three or more years of full-time, demonstrated classroom teaching experience; must be knowledgeable about research-based literacy instruction as outlined in rule 4.02(5) – 4.02(13) and the Colorado Academic Standards in reading, writing and communicating, and must demonstrate the competencies below:

6.04(1) The reading specialist is knowledgeable about literacy assessments and evaluation and is able to:

6.04(1)(a) utilize and implement validated screening assessments designed to identify students at risk for reading difficulties, including students who are multi-lingual and English-language learners;

6.04(1)(b) utilize information from screening (interim) assessments, diagnostic surveys, progress monitoring and descriptive data to:

6.04(1)(b)(i) make instructional decisions regarding content, entry point, pace, intensity and student group; and

6.04(1)(b)(ii) determine appropriate methods for literacy instruction and intervention.

6.04(1)(c) support teachers in administering, understanding, interpreting and using the results of formal and informal assessments in reading, spelling, writing and relevant literacy subskills that are targeted for instruction;

6.04(1)(d) administer and interpret diagnostic assessments of:

6.04(1)(d)(i) phonological and phonemic awareness;

6.04(1)(d)(ii) decoding skill, oral reading fluency and comprehension; and

6.04(1)(d)(iii) spelling and writing.

6.04(1)(e) utilize formative and summative assessment data to:

6.04(1)(e)(i) evaluate instructional effectiveness at all levels – student, classroom, grade, school and district – to inform decisions about resources and instruction; and

6.04(1)(e)(ii) set and evaluate specific and measurable short- and long-term goals for the student, classroom and/or school.

6.04(2) The reading specialist is knowledgeable about the nature, manifestations and prevalence of and research-supported treatments for reading and writing difficulties and:

6.04(2)(a) recognizes that dyslexia, dysgraphia and other reading disorders exist along a continuum of severity;

6.04(2)(b) understands how reading difficulties and their characteristics may change over time in response to instruction and development;

6.04(2)(c) understands how both intrinsic and extrinsic factors contribute to reading difficulties, including how certain conditions/exceptionalities can affect reading (e.g., Attention Deficit Hyperactivity Disorder, Autism Spectrum Disorder and language processing and comprehension disorders);

6.04(2)(d) recognizes the social-emotional impact reading difficulties may have on students and their families;

6.04(2)(e) has a foundational knowledge of the tenets of National Institute of Child Health and Human Development (NICHD)/International Dyslexia Association's (IDA) definition of dyslexia; and

6.04(2)(f) recognizes the distinguishing characteristics of a person with dyslexia.

6.04(3) The reading specialist is trained to effectively instruct, direct or supervise instruction of students with reading disorders and demonstrates expertise and advanced knowledge and application of:

6.04(3)(a) processes, strategies and approaches to reading;

6.04(3)(b) explicit, systemic and evidence-based learning and instruction addressing:

6.04(3)(b)(i) the five components of scientifically based reading, including phonemic awareness, phonics, vocabulary, fluency, and comprehension;

6.04(3)(b)(ii) cognitive skills associated with reading success (e.g., working memory, rapid naming ability, metacognition);

6.04(3)(b)(iii) oral language and writing development; and

6.04(3)(c) targeted, structured multisensory instruction strategies for phonologically based disorders.

6.04(4) The reading specialist shall self-assess the effectiveness of instruction, direction and/or supervision based on the achievement of students and pursue continuous professional

development through appropriate activities, coursework and participation in relevant professional organizations.

6.05 Director of Special Education (Grades K-12)

The director of special education must hold an earned master's or higher degree in special education or a graduate degree that demonstrates knowledge and application of standards for the specialist (as determined by the Department) from an accepted institution of higher education; have completed a minimum of two years of experience working with students with disabilities; have completed an approved program for the preparation of special education directors, including a supervised field-based experience; and meet the standards for professional competency outlined in rule 1 CCR 301-37 6.11-6.19 for the initial administrator license with a director of special education endorsement.

6.06 Director of Gifted Education (Grades K-12)

The director of gifted education must hold an earned master's or higher degree in gifted education from an accepted institution of higher education or a graduate degree that demonstrates knowledge and application of standards for the specialist (as determined by the Department); have completed a minimum of two years of experience working with students with exceptional academic and talent aptitude (gifted students); have completed an approved program for the preparation of gifted education directors, including a supervised field-based experience; and meet the standards for professional competency outlined in rule 1 CCR 301-37 6.20-29 for the initial administrator license with a director of gifted education endorsement.

7.00 Special services endorsements

The following shall serve as standards for special services endorsements on an initial or professional special services provider license.

Commented [KT8]: Per 22-60.5-106, C. R. S., it is the state board's authority to establish by rule and regulation appropriate endorsements and the criteria for such endorsements.

7.01 School Audiologist (Ages Birth-21)

To be endorsed as a school audiologist, an applicant must hold an earned master's or higher degree from an accepted institution of higher education or, for candidates who graduate after 2007, hold a clinical doctorate from an accepted institution of higher education; have successfully completed an approved program in audiology; have successfully completed a practicum or internship in a school setting equivalent to a minimum of eight weeks, full-time, under the supervision of a professionally licensed or masters-level licensed audiologist; and have passed an approved national audiology exam. The school audiologist is knowledgeable about and able to demonstrate the competencies specified below:

An applicant who holds a license to practice in Colorado pursuant to the Audiologist Practice Act (section 12-210-101, et seq., C.R.S.) or a valid license in another state and able to practice in Colorado pursuant to the Audiology and Speech-Language Pathology Interstate Compact (section 24-60-4101, C.R.S.), and who fulfills the practicum requirement outlined above, satisfies these requirements.

7.01(1) The school audiologist is knowledgeable about the procedures necessary to identify hearing loss in children/students including, but not limited to, the following and is able to:

7.01(1)(a) — perform identification audiometric procedures including pure tone audiometric screening, immittance measurements, otoacoustic emissions and other electrophysiological measurements;

7.01(1)(b) — establish, administer and coordinate hearing and/or auditory processing disorders (APD) identification programs.

- 7.01(1)(c) ~~_____~~ train and supervise audiology support or other personnel as appropriate to screening for hearing loss and/or APD; ~~and~~.
- 7.01(1)(d) ~~_____~~ maintain accurate and accountable records for referral and follow-up of hearing screenings.
- 7.01(2) The school audiologist is knowledgeable about and is able to effectively implement the procedures necessary to assess hearing loss in children/students including but not limited to:
- 7.01(2)(a) ~~_____~~ performing comprehensive audiologic evaluations including pure tone air and bone conduction measures; speech reception and word recognition measures, such as situational functional hearing measures; immittance measures; otoscopy and other tests including interpretation of electrophysiological measures; and differential determination of auditory disorders and/or APD to determine the range, nature and degree of hearing loss and communication function; ~~_____~~.
- 7.01(2)(b) ~~_____~~ performing comprehensive educationally and developmentally relevant audiologic assessments of children/students ages birth to 21 using bias-free procedures appropriate to receptive and expressive ability and behavioral functioning; ~~_____~~.
- 7.01(2)(c) ~~_____~~ providing recommendations for appropriate medical, educational and community referral for other services as necessary for the identification and management of children/students with hearing loss and/or APD and their families/guardians; ~~_____~~.
- 7.01(2)(d) ~~_____~~ interpreting in writing and verbally audiologic assessment results, functional implications and management recommendations to educational personnel, parents/guardians and other appropriate individuals including physicians and professionals, as part of a multidisciplinary process; ~~_____~~.
- 7.01(2)(e) ~~_____~~ selecting, ~~and~~ maintaining ~~and calibrating~~ audiologic equipment, ~~ensuring it is calibrated in accordance with state standards; and~~.
- 7.01(2)(f) ~~_____~~ providing access to assessment information through interpreters/translators.
- 7.01(3) The school audiologist is knowledgeable about procedures of evaluation and provision of amplification instrumentation to children/students in school and is able to:
- 7.01(3)(a) ~~_____~~ determine children's/students' needs for and the appropriateness of hearing aids, cochlear implants and other hearing-assistance technology; ~~_____~~.
- 7.01(3)(b) ~~_____~~ perform the appropriate selection, verification and maintenance of hearing-assistance technology, including ear mold impressions and modifications; ~~_____~~.
- 7.01(3)(c) ~~_____~~ evaluate situational functional communication performance to validate amplified or electrically stimulated hearing ability; ~~_____~~.
- 7.01(3)(d) ~~_____~~ plan and implement orientation and education programs to assure realistic expectations and to improve acceptance of, adjustment to and benefit from hearing aids, cochlear implants and hearing-assistance technology; ~~_____~~.
- 7.01(3)(e) ~~_____~~ assess whether hearing aids, cochlear implants and other hearing-assistance technology, as used in school, are functioning properly; ~~and~~.
- 7.01(3)(f) ~~_____~~ notify parent/guardian when a repair and/or maintenance of personal hearing-assistance devices is required.

7.01(4) The school audiologist is knowledgeable about and able to:

7.01(4)(a) — identify appropriate intervention methods, necessary levels of service and vocational and work-study programming as part of a multidisciplinary team process that integrates:

7.01(4)(a)(i) — auditory skill development, aural rehabilitation and listening-device orientation and training;

7.01(4)(a)(ii) — speech skill development including phonology, voice and rhythm;

7.01(4)(a)(iii) — visual communication systems and strategies including speech-reading, manual communication and cued speech;

7.01(4)(a)(iv) — language development, i.e. expressive and receptive oral, signed, cued and/or written language including pragmatics;

7.01(4)(a)(v) — the selection and use of appropriate instructional materials and media;

7.01(4)(a)(vi) — the structuring of learning environments including acoustic modifications;

7.01(4)(a)(vii) — case management and care coordination with family/parent/guardian, school and medical and community services;

7.01(4)(a)(viii) — habilitative and compensatory skill training to reduce academic deficits related but not limited to reading and writing;

7.01(4)(a)(ix) — social skills, self-esteem and self-advocacy support and training;

7.01(4)(a)(x) — the transition between, but not limited to, levels, schools, programs and agencies; and

7.01(4)(a)(xi) — support for a variety of education options for children/students with hearing loss and/or APD.

7.01(4)(b) — develop and implement treatment plans that facilitate communication competence and which may include, but need not be limited to, speech-reading, auditory/aural development, communication strategies and visual-communication systems and strategies;

7.01(4)(c) — provide and/or make recommendations with regard to assistive technology such as, but not limited to, hearing aids and hearing-assistance technology, to include radio/television, telephone, pager and alerting convenience;

7.01(4)(d) — provide developmentally appropriate aural rehabilitation services including, but not limited to, programming in the child's natural environment, if appropriate, in the areas of speech-reading, listening, communication strategies, use and care of hearing aids, cochlear implants, hearing-assistance technology and self-management of hearing needs;

7.01(4)(e) — provide information and training to teachers, administrators, children/students, parents/guardians and other appropriate professionals and individuals regarding hearing and auditory development; hearing loss and/or APD and implications for communication, learning, psychosocial development and the setting and meeting of vocational goals; hearing aids, cochlear implants and hearing assistance devices; effective communication

strategies; effects of poor classroom acoustics and other environmental barriers to learning; and EHDI (early hearing loss detection and intervention) programs and resources.

7.01(4)(f) — apply appropriate instructional modifications and classroom accommodations to curricula delivery and academic methodology, materials and facilities; and

7.01(4)(g) — conduct analyses of classroom acoustics and make recommendations for improvement of the listening environment using principles of classroom acoustics, acoustical measurement and acoustical modifications.

7.01(5) The school audiologist is knowledgeable about the parameters of information counseling and advocacy and is able to:

7.01(5)(a) — counsel families/guardians and children/students with hearing loss and/or APD to provide emotional support, information about hearing loss and the implications thereof, and strategies to maximize communication, academic success and psycho-social development;

7.01(5)(b) — assure that parents/guardians receive comprehensive, unbiased information regarding hearing loss, communication options, educational programming and amplification options, including cochlear implants in cases of severe to profound hearing loss;

7.01(5)(c) — demonstrate sensitivity to cultural diversity and other differences in characteristics including those found among individuals and within family/guardian systems and deaf culture; and

7.01(5)(d) — demonstrate effective interpersonal communication skills in a variety of settings for a variety of circumstances.

7.01(6) The school audiologist is knowledgeable about the parameters associated with hearing conservation and is able to:

7.01(6)(a) — develop, implement and/or manage programs for the prevention of hearing loss; and

7.01(6)(b) — provide education, when appropriate, as related to and regarding access to hearing protection devices.

7.01(7) The school audiologist is knowledgeable about ethical conduct and is able to:

7.01(7)(a) — comply with federal and state laws, regulations and policies including local district and school policies and relevant case law regarding referral, assessment, placement, related processes and the delivery of service(s);

7.01(7)(b) — effectively articulate the role of the school audiologist as part of the special education team within the learning community;

7.01(7)(c) — incorporate knowledge of school systems, multidisciplinary teams and community, national and professional resources into planning;

- 7.01(7)(d) ~~_____~~ effectively collaborate with teachers, parents and related personnel in case management with flexibility and in a professional manner; ~~_____~~
- 7.01(7)(e) ~~_____~~ utilize a range of interpersonal communication skills such as, but not limited to, consultation, collaboration, counseling, listening, interviewing and teaming, as appropriate, in the identification of, prevention of harm to, assessment of and/or intervention with children/students suspected of or identified as having auditory disabilities; ~~_____~~
- 7.01(7)(f) ~~_____~~ mentor and supervise audiology support personnel so that the auditory needs of children/students are effectively addressed; ~~_____~~
- 7.01(7)(g) ~~_____~~ maintain accurate records and data relevant to the planning, management and evaluation of programs; ~~_____~~
- 7.01(7)(h) ~~_____~~ educate other professionals and the community about implications of hearing loss; ~~and; _____~~
- 7.01(7)(i) ~~_____~~ initiate requests or network to acquire support when needed.

7.02 School Occupational Therapist (Ages Birth-21)

To be endorsed as a school occupational therapist, an applicant must hold an earned bachelor's or higher degree in occupational therapy from an American Occupational Therapy Association-accredited program at an accepted institution of higher education; ~~have successfully completed an American Occupational Therapy Association-accredited college or university program in occupational therapy;~~ have successfully completed a practicum or internship, as required by the school of occupational therapy attended, which may be held in a variety of settings; hold a valid ~~occupational therapy~~ license to practice in Colorado pursuant to the Occupational Therapy Practice Act (section 12- 270-107, C.R.S.) or a valid license issued by another state and able to practice in Colorado pursuant to the Occupational Therapy Licensure Compact (section 24-60-4101, C.R.S.) issued by the Colorado Department of Regulatory Agencies and have passed the occupational therapy national registration examination administered by the national board for certification in occupational therapy. The school occupational therapist is knowledgeable about and is able to demonstrate the competencies specified below:

7.02(1) The school occupational therapist is knowledgeable about the legal framework of occupational therapy within the public school system and is able to:

- 7.02(1)(a) ~~_____~~ articulate the letter and intent of federal, special education and state laws and policies related to school-based occupational therapy, including issues related to potential safety and liability; ~~and; _____~~
- 7.02(1)(b) ~~_____~~ articulate to a variety of audiences the role of school-based occupational therapy for ages birth-21 including, but not limited to, the school occupational therapist's contribution to:
 - 7.02(1)(b)(i) ~~_____~~ students' individualized education plans and programs (IEP) and individualized family service plan (IFSP);
 - 7.02(1)(b)(ii) ~~_____~~ students' participation within the general education curriculum including, but not limited to, academic, non-academic and extracurricular activities and in the community including, but not limited to, vocational and independent living training; and
 - 7.02(1)(b)(iii) ~~_____~~ early intervention for children ages birth-2 and preschoolers ages 3-5, including working with families and caregivers and with consideration for natural environments.

7.02(2) The school occupational therapist is knowledgeable about processes for determining eligibility for special education services, the need for related services and the design and implementation of IEPs. The school occupational therapist, working with other educational professionals and interdisciplinary team members, is able to:

7.02(2)(a) _____ consult with team on pre-referral strategies in support of a student's participation and performance within the educational context;_

7.02(2)(b) _____ evaluate student eligibility for early intervention or special education services and to make referrals when pre-referral interventions prove ineffective or inadequate;_

7.02(2)(c) _____ adhere to all established confidentiality and due process policies and procedures;_ and;_

7.02(2)(d) _____ advocate for student access to and participation in the general curriculum and in the least restrictive environment.

7.02(3) The school occupational therapist is knowledgeable about appropriate and accurate assessment of a student's occupational and physical abilities and how to determine the need for adaptive equipment, and is able to:

7.02(3)(a) _____ complete and evaluate observations and/or screenings of a student's strengths, problems and potential issues within the educational setting;_

7.02(3)(b) _____ coordinate data-gathering from record reviews, interviews, checklists, specific observations and/or collaboration or consultation to avoid duplication of service(s) and/or assessment(s), including interpretation of medical records and prescriptions as applied to the educational environment;_

7.02(3)(c) _____ identify and select appropriate, valid and reliable assessments to measure contextual factors, activity demands and student factors related to academic achievement;_

7.02(3)(d) _____ assess a student's occupational performance during activities of daily living including, but not limited to, hygiene, functional mobility, eating, dressing, toileting, communication and meal preparation;_

7.02(3)(e) _____ assess a student's performance skills; motor skills including, but not limited to, posture, mobility, coordination, strength and effort, and energy; process skills, including but not limited to, energy, knowledge, temporal organization, organizing space and objects and adaptation; and communication/interaction skills including, but not limited to, body language, information exchange and relations with others;_

7.02(3)(f) _____ assess the student's performance context related to cultural, physical, social, personal, temporal and virtual aspects;_

7.02(3)(g) _____ assess factors internal to the student including, but not limited to, those physical, cognitive and psycho-social factors that influence development and performance and those which interact with illness, disease and disability;_

7.02(3)(h) _____ identify environmental factors that can either support or hinder a student's academic performance;_

7.02(3)(i) _____ interpret assessment data to develop and refine hypotheses about the student's academic performance and effectively communicate, both verbally and in writing, assessment

results to a variety of audiences including, but not limited to, educators, paraprofessionals, parents and students, as appropriate.

7.02(3)(j) — within the context of an IEP or IFSP team, use clinical experience, clinical observation and professional judgment, as well as assessment data to plan and develop appropriate and targeted student objectives to be measured regularly for systematic comparisons of current and past student performance; and

7.02(3)(k) — report regular progress in attainment of the student's goals and objectives and make appropriate modifications, as needed, to the student's IEP or IFSP.

7.02(4) The school occupational therapist is knowledgeable about how to promote student engagement in everyday educational occupations and activities and how to support student participation in education and community contexts, and is able to:

7.02(4)(a) — provide appropriate classroom and environmental modifications and accommodations;

7.02(4)(b) — adapt curriculum, curriculum materials and presentation style to the unique fine, visual, sensor and gross motor needs of each student;

7.02(4)(c) — integrate appropriate equipment and/or devices, including low and high technology, to facilitate functional and independent skills and minimize deficiencies and increased deformity;

7.02(4)(d) — participate in program or curriculum development representing the needs of diverse learners to provide building level interventions, as needed and as appropriate;

7.02(4)(e) — identify and utilize intervention approaches based on documented evidence of research-based best practices; and

7.02(4)(f) — provide school occupational therapy reports to students and families on a regular basis, coinciding with the school district's progress reporting schedule and format.

7.02(5) The school occupational therapist is knowledgeable about how to create, communicate and sustain effective collaborative relationships with relevant individuals, families, schools and communities and is able to:

7.02(5)(a) — communicate effectively with students, families, teachers and other professionals including, but not limited to, those in the private sector to appropriately plan for meeting a student's needs and to avoid duplication of service(s);

7.02(5)(b) — communicate respectfully and sensitively to students and adults;

7.02(5)(c) — teach, facilitate, coordinate, schedule and supervise paraprofessionals, other staff members and family members/guardians to ensure that IEPs are effectively implemented;

7.02(5)(d) — facilitate and/or assist in transition of students from one setting to another in collaboration with students, their families, other educational staff, support-related professionals and/or community organization representatives, as appropriate;

7.02(5)(e) — identify and utilize resources and strategies that promote effective partnerships with individuals, families, school personnel and appropriate community entities; and

7.02(5)(f) _____ demonstrate the skills needed for the design and application of therapeutic strategies based on the defined needs, motivational levels, interests, preferences and individual backgrounds and characteristics of students.

7.02(6) The school occupational therapist is knowledgeable about ethical and legal standards of the practice of occupational therapy in the state of Colorado and is able to:

7.02(6)(a) _____ address ethical considerations in all student- and occupation-related practices;_

7.02(6)(b) _____ recognize cultural and other biases and modify IEPs and IFSPs accordingly;_

7.02(6)(c) _____ interpret literature and apply documented, successful, evidence-based research and practice related to school occupational therapy;_

7.02(6)(d) _____ deliver occupational therapy services in accordance with the American Occupational Therapy Association's standards and policies and those of the state of Colorado;_ and;

7.02(6)(e) _____ demonstrate compliance with the most current occupational therapy code of ethics for the American Occupational Therapy Association.

7.03 School Orientation and Mobility Specialist (Ages Birth-21)

To be endorsed as a school orientation and mobility specialist, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have successfully completed an approved preparation program for school orientation and mobility specialists; have successfully completed a practicum or internship in a school setting, equivalent to a minimum of 320 hours, full-time, under the supervision of an Academy of Certification of Vision Rehabilitation and Education Professionals (ACVREP)-licensed orientation and mobility specialist; have passed the ACVREP examination and hold a current and valid ACVREP orientation and mobility certificate.

An applicant who holds a valid ACVREP Orientation and Mobility Certificate and who meets the practicum experience requirements specified above satisfies these requirements.

The orientation and mobility specialist must have demonstrated the competencies specified below:

7.03(1) The school orientation and mobility specialist is knowledgeable about the legal framework, historical and auricular foundations and cultural social-economic factors affecting students with visual impairments and other concomitant disabilities, and about systems of orientation and mobility and is able to:

7.03(1)(a) _____ articulate the history and philosophy of instructional practices as related to orientation and mobility instruction for children and youth with visual impairments;_

7.03(1)(b) _____ incorporate and address in planning variations in beliefs, traditions and values across cultures and their potential effect on attitudes toward and expectations for individuals with visual impairments;_

7.03(1)(c) _____ research, identify and apply for appropriate and relevant federal entitlements that provide specialized equipment and materials for individuals with visual impairments;_

7.03(1)(d) _____ communicate effectively with regard to current educational definitions, identification criteria, labeling issues and incidence and prevalence figures for individuals with visual impairments to a variety of audiences, as needed and appropriate;_

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7.03(1)(e) describe the use of the long cane as a mobility system; the different types of long canes, adapted canes and adaptive mobility devices and their strengths and limitations as travel tools in consideration of individual travel needs and travel environments; and articulate and utilize prescription techniques for canes, adapted canes and adaptive mobility devices.

7.03(1)(f) describe the dog guide as a mobility system; the methods and strategies for providing orientation assistance to a dog guide user; and the process for making referrals to dog guide training centers.

7.03(1)(g) describe the use and application of electronic travel aids (ETAs) as a supplementary mobility system; how ETAs are classified and the basic principles of operating commercially available ETAs.

7.03(1)(h) explain the uses and applications of optical and non-optical devices as a supplementary mobility system; the classification and basic principles of operation of optical and non-optical devices and the various ways in which persons with visual impairments may use these devices in travel environments.

7.03(1)(i) describe the use of ambulatory aids such as, but not limited to, support canes, walkers, crutches and wheelchairs, and the manner in which these devices may be used by individuals who are blind or visually impaired; and.

7.03(1)(j) articulate the correlation between and the advantages and disadvantages of mobility systems for persons with a range of visual impairment, including those with concomitant disabilities, and communicate this information effectively to students and their families.

7.03(2) The school orientation and mobility specialist is knowledgeable about human development and the implications of blindness/visual impairment and deaf-blindness upon development, and orientation and mobility skill acquisition. The school orientation and mobility specialist is able to:

7.03(2)(a) explain the structure, function and normal development of the human visual system and the impact on development of other sensory systems when vision is or becomes impaired.

7.03(2)(b) describe and interpret basic terminology, manifestations, movement and travel implications of diseases and disorders of the human visual system.

7.03(2)(c) explain the classification and quantification of hearing loss; the special auditory needs of persons with visual impairments; the use of hearing aids by persons with visual impairments and the uses of audiometric data for traffic interpretation.

7.03(2)(d) describe the role of perception as it pertains to cognition, sensation, attention, memory, cognitive mapping, orientation and the utilization of information as conveyed through sensory means.

7.03(2)(e) articulate the effects of medications on the functioning of the sensory systems and on general mobility.

7.03(2)(f) describe the impact of and needs generated by hearing loss on an individual's modes of communication, movement and travel.

7.03(2)(g) explain the effects of visual impairment, with and without additional disabilities, on early development of motor and cognition abilities, self-esteem, social/emotional interaction, self-help, communication, travel safety and orientation and mobility skill(s) acquisition.

7.03(2)(h)_____describe the impact of vision loss on the family and the strategies available to family members, caregivers and support systems in encouraging and supporting independence;_____

7.03(2)(i)_____describe the similarities and differences between the sensory, cognitive, physical, cultural, social, emotional and travel needs of students with and without visual impairments;_____

7.03(2)(j)_____discuss the role and function of incidental learning when vision is impaired as related to concept development and travel skills; and_____

7.03(2)(k)_____recommend adaptations across student travel environments that can address and accommodate individual sensory and physical needs.

7.03(3) The school orientation and mobility specialist is knowledgeable about the accurate assessment of students' sensory, developmental and orientation and mobility performance and is able to:

7.03(3)(a)_____interpret and apply specialized terminology as used in medical diagnoses of eye reports, low vision evaluation reports, orientation and mobility assessment(s) of individuals with visual impairments and those with concomitant disabilities;_____

7.03(3)(b)_____articulate the rudimentary practices used for screening hearing function(s) and ensure that hearing is screened prior to assessment of orientation and mobility knowledge and skills;_____

7.03(3)(c)_____gather background information and family history relevant to the individual student's visual status and orientation and mobility needs;_____

7.03(3)(d)_____utilize in planning data from specific and appropriate orientation and mobility assessments to measure functional vision and orientation and mobility knowledge and skills, including, but not limited to, concept development, sensory-motor function and informal and formal mobility techniques;_____

7.03(3)(e)_____address in planning ethical considerations, legal provisions, regulations, policies and guidelines for the valid orientation and mobility assessment of individuals with visual impairments, including those with concomitant disabilities;_____

7.03(3)(f)_____adapt and implement a variety of orientation and mobility assessment procedures when evaluating individuals with visual impairments, including those with concomitant disabilities;_____

7.03(3)(g)_____incorporate into planning the interpretation and application of assessment results from related professional fields in conjunction with orientation and mobility assessments of individuals with visual impairments, including those with concomitant disabilities;_____

7.03(3)(h)_____implement appropriate strategies to assess environments for accessibility and safety;_____

7.03(3)(i)_____analyze and utilize assessment information in the development of the individualized family service plans (IFSP) and individualized education programs (IEP) for individuals with visual impairment, including those with concomitant disabilities;_____

7.03(3)(j)_____write behaviorally stated goals and objectives that are realistic, measurable, appropriately sequenced and based on assessment findings;_____

7.03(3)(k)_____apply strategies and methods for using assessment information to the ongoing evaluation of student progress and implement appropriate program adaptations and remediation strategies, accordingly; and_____

7.03(3)(l) _____ create and accurately maintain required school records with regard to orientation and mobility assessments for individuals with visual impairments, including those with concomitant disabilities.

7.03(4) The school orientation and mobility specialist is knowledgeable about specialized instruction and appropriate modifications and accommodations for learners with visual impairment and is able to:

7.03(4)(a) _____ establish appropriate and effective communication, interaction and rapport with children/students of all ages and their families or others who may be accountable;_____

7.03(4)(b) _____ counsel students regarding the setting of high but achievable mobility goals; choosing a mobility system and related matters involving the use of mobility skills in daily living; and recognize and incorporate into planning students' evolving attitudes toward orientation and mobility instruction;_____

7.03(4)(c) _____ identify resources and/or acquire and utilize and/or design and produce appropriate media and materials that support orientation and mobility instruction including, but not limited to, visual, tactile and auditory maps, models, graphic aids and recorded information;_____

7.03(4)(d) _____ apply observational techniques appropriate to orientation and mobility instruction;_____

7.03(4)(e) _____ implement instructional strategies that can enable person(s) with visual impairments to use sensory information in travel environments;_____

7.03(4)(f) _____ design and implement instructional programs using the optical and non-optical devices recommended by eye care professionals for use in travel environments;_____

7.03(4)(g) _____ evaluate and select environments for the introduction, development and reinforcement of orientation and mobility knowledge and skills;_____

7.03(4)(h) _____ demonstrate the construction, assembly and maintenance of the long cane and other adaptive mobility devices; articulate the nomenclature related to the cane and its parts; use appropriate resources for procuring long canes and other devices and demonstrate proficiency in maintaining and repairing canes and other adaptive mobility devices;_____

7.03(4)(i) _____ provide student instruction and support to address sensory skills, body image concept development, directionality, environmental concepts, address systems, interpretation of traffic patterns and related orientation and mobility concepts;_____

7.03(4)(j) _____ modify and provide instruction related to techniques of trailing, upper and lower body protection, squaring off, search, room familiarization, use of landmarks and cues, solicitation of assistance and human guides;_____

7.03(4)(k) _____ modify and provide instruction related to appropriate cane techniques and their applications in indoor and outdoor environments including but not limited to diagonal cane and touch technique; touch technique modifications, including three-point touch, touch and slide, touch and drag; constant contact technique and the use of the cane for shore-lining;_____

7.03(4)(l) _____ provide instruction on techniques for using adaptive mobility devices in indoor and outdoor environments;_____

7.03(4)(m) _____ provide instruction with regard to orientation and travel skills including, but not limited to, route planning; direction taking; distance measurement and estimation; utilization of compass directions; recovery techniques; analysis and identification of intersections and traffic

patterns; use of traffic control devices; negotiation of public conveyance systems, such as elevators and escalators; techniques for crossing streets; and techniques for travel in indoor, outdoor, residential, small business, business district, mall and rural area environments.

7.03(4)(n) — select appropriate distances and positioning relative to the student for safe and effective instruction as the student advances through the orientation and mobility program, which may best facilitate progress as skills relevant to a wide variety and complexity of environments are introduced.

7.03(4)(o) — select, design, implement and utilize “drop-off” lessons for the assessment of orientation and mobility skills.

7.03(4)(p) — instruct students on how to address travel needs when the distance between the instructor and the student is remote, and develop and facilitate “solo” lessons and independent travel experiences.

7.03(4)(q) — articulate the role of regular and special education personnel and related service professionals who may be involved in interdisciplinary, multidisciplinary or trans-disciplinary instruction of the child/student, and.

7.03(4)(r) — develop appropriate lesson plans and record pertinent anecdotal lesson notes concisely.

7.03(5) The school orientation and mobility specialist is knowledgeable about effective communication and successful collaboration with students, their families and relevant education and community personnel and is able to:

7.03(5)(a) — describe and respond to movement and travel-related concerns of parents of individuals with visual impairments with varied and appropriate strategies to assist them in addressing such concerns.

7.03(5)(b) — articulate the roles of individuals with visual impairments to parents and other family members, educational service providers and relevant community personnel, in planning for students' individualized orientation and mobility programs.

7.03(5)(c) — describe the roles of and be able to provide direction for paraprofessionals or para-educators who assist with the orientation and mobility instruction of students with visual impairments.

7.03(5)(d) — utilize appropriate strategies for assisting families and other team members in planning for level-transitioning of students with visual impairments.

7.03(5)(e) — provide resources for service, networking and organization specifically oriented to students with visual impairments and deaf-blindness to families, related professionals and other support personnel.

7.03(5)(f) — advocate for the necessity of role models for students with visual impairments and deaf-blindness.

7.03(5)(g) — utilize appropriate and effective communication, consultation and collaboration skills and strategies in working with students with visual impairment, parents, regular and special education staff and community personnel regarding students' orientation and mobility needs and program(s).

7.03(5)(h) _____ initiate and coordinate respectful and beneficial relationships between and among families and relevant professionals, where appropriate, to encourage and assist families in becoming informed and active participants in students' orientation and mobility programs; ~~and~~

7.03(5)(i) _____ plan and conduct conferences with families or primary caregivers as required and/or necessary; ~~and~~

7.03(5)(j) _____ manage and direct the activities of para-educators or peer tutors who work with individuals with visual impairments.

7.03(6) The school orientation and mobility specialist is knowledgeable about adhering to ethical and appropriate professional practices in contributing to the orientation and mobility skill development of children/students and is able to:

7.03(6)(a) _____ apply the ethical considerations governing the profession of orientation and mobility to the education of the learner who is visually impaired, recognizing the importance of the orientation and mobility specialist as a role model for students with visual impairment(s); ~~and~~

7.03(6)(b) _____ recognize cultural and other biases to assure that instruction of students is discrimination-free; ~~and~~

7.03(6)(c) _____ articulate and address in planning concerns related to student safety and potential liability and keep current on national and local environmental accessibility standards; ~~and~~

7.03(6)(d) _____ engage in the activities of professional organizations which represent and advocate for the field of visual impairment, whenever relevant; ~~and~~

7.03(6)(e) _____ keep current on literature and documented effective research applicable to individuals with visual impairments and orientation and mobility needs and apply relevant information to planning and objectives setting for students; ~~and~~

7.03(6)(f) _____ practice professional self-assessment and seek out professional development activities that support the advancement of personal skills and knowledge and which can benefit students with visual impairments, their families and/or colleagues, and to maintain ACVREP certification.

7.04 School Physical Therapist (Ages Birth-21)

To be endorsed as a school physical therapist, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed a physical therapy program accredited by the American Physical Therapy Association's (APTA) Commission on the Accreditation of Physical Therapy Education (CAPTE); ~~have successfully completed an appropriate practicum or internship as required by the physical therapy program attended~~; hold a valid ~~physical therapy~~ license ~~to practice in Colorado pursuant to the Physical Therapists Practice Act (section 12-285-101, et. seq. C.R.S.) or a valid license issued by another state and ale to practice in Colorado pursuant to the Physical Therapy Licensure Compact (section 24-60-3702, C.R.S.) issued by the Colorado Department of Regulatory Agencies~~ and have demonstrated the competencies specified below:

7.04(1) The school physical therapist is knowledgeable about the legal framework of physical therapy within the public school system and is able to:

7.04(1)(a) _____ articulate the letter and intent of state and federal special education law, rule and policy, including local education agency policy, as related to school-based physical therapy and including, but not limited to, issues related to safety and liability; ~~and~~

7.04(1)(b) _____ describe the etiology of various physical and medical conditions that impact the functional ability of the student within the school, home and community environments; _____

7.04(1)(c) _____ articulate the difference between medically based physical therapy management and general physical therapy management as a related service under IDEA, and adapt physical therapy management strategies from the medical model to the educational model; _____ and _____

7.04(1)(d) _____ utilize strategies that consider the influence of diversity on assessment, eligibility determination, intervention planning and placement of individuals with exceptional learning needs.

7.04(2) The school physical therapist is knowledgeable about the process of determining eligibility for special education services and/or related services; designing and implementing Individualized Educational Programs (IEPs) and/or Individualized Family Service Plans (IFSPS) and is able to:

7.04(2)(a) _____ implement pre-referral interventions as part of a special education team that supports the student's participation and performance within the educational context; _____

7.04(2)(b) _____ refer students for special education when the education team determines that pre-referral interventions have been ineffective or inadequate; _____

7.04(2)(c) _____ participate as needed on an interdisciplinary team to evaluate student eligibility for early intervention or special education services; _____

7.04(2)(d) _____ adhere to all established confidentiality and due process guidelines and procedures; _____ and _____

7.04(2)(e) _____ advocate for student access to and participation in the general curriculum and the least restrictive environment.

7.04(3) The school physical therapist is knowledgeable about completing accurate assessments of a student's physical abilities and needs for adaptive equipment, and is able to:

7.04(3)(a) _____ complete and evaluate observations and/or screenings to assess a student's strengths and challenges within the educational setting; _____

7.04(3)(b) _____ provide gross motor and fine motor screenings to determine if a child is in need of a complete evaluation; _____

7.04(3)(c) _____ coordinate data-gathering from record reviews, interviews, checklists, specific observations, interpretation of medical records and identification of prescriptions and medications taken, as each applies to the educational environment, and to collaborate or consult with others, when indicated, in order to avoid duplication of services and/or assessment; _____

7.04(3)(d) _____ identify and select valid and reliable assessment methods to measure contextual factors, activity demands and student factors that may be affecting school performance; _____

7.04(3)(e) _____ where appropriate, conduct tests and measures of the following areas and evaluate for performance within the educational setting: muscle strength, force, endurance and tone; reflexes and automatic reactions, movement skill and accuracy; joint motion, mobility and stability; sensation and perception; peripheral nerve integrity; locomotor skill, stability and endurance; activities of daily living; cardiac, pulmonary and vascular functions; fit, function and comfort of seating and positioning equipment, prosthetic, orthotic and other assistive devices; posture and body mechanics; limb length, circumference and volume; thoracic excursion and breathing patterns; vital signs and physical home and school environments; _____

- 7.04(3)(f)_____incorporate strategies that consider the influence of diversity on assessment, eligibility, programming and placement of individuals with exceptional learning needs_____
- 7.04(3)(g)_____identify and address in planning environmental factors that may support or hinder a student's performance_____
- 7.04(3)(h)_____interpret assessment data to develop and refine hypotheses about the student's performance_____
- 7.04(3)(i)_____interpret and communicate verbally and in writing the results of the assessment process for a variety of audiences including, but not limited to, teachers, paraprofessionals, related service professionals, students and parents/guardians, as appropriate_____
- 7.04(3)(j)_____use proven documented evidence of clinical experience, clinical observation, professional judgment, test results and evidence in relevant literature within the context of IEPs or IFSPs to plan and develop appropriate and measurable student-targeted outcomes_____and_____
- 7.04(3)(k)_____report progress in the attainment of annual goals and objectives and make appropriate modifications, as needed, to the student's IEP or IFSP.

7.04(4) The school physical therapist is knowledgeable about developing and providing related-service support to special education communities for students with disabilities and is able to:

- 7.04(4)(a)_____apply current proven effective practice appearing in the literature related to the practice of physical therapy in the school environment and to the development of strategies that can gain maximum access for and participation in a free and appropriate public education by all students_____
- 7.04(4)(b)_____provide appropriate classroom and environmental modifications and accommodations to facilitate students' ability to receive and participate in an appropriate public education_____
- 7.04(4)(c)_____reinforce functional behavior(s) as related to the cognitive, communicative, social/emotional and physical needs of students_____
- 7.04(4)(d)_____integrate appropriate equipment and/or devices including low and high technology to facilitate more functional and independent skills within the educational environment_____
- 7.04(4)(e)_____identify safety concerns and appropriate interventions for both the student and the provider, in the case of providing physical assistance to the student, to prevent injury_____
- 7.04(4)(f)_____identify appropriate strategies and interventions to assist the student in obtaining improved functional academic performance through consultation and direct and/or indirect intervention(s)_____
- 7.04(4)(g)_____identify and utilize intervention approaches based on established best practices and documented research-based evidence including remediation and/or appropriate adaptations for positioning needs, and adaptive/assistive equipment needs and/or the need for physical or manual assistance to perform functional life skills within the educational environment, home or community_____
- 7.04(4)(h)_____provide school physical therapy reports to students and families on a regular basis that coincide with the school district's progress reporting schedule and format_____and_____

7.04(4)(i) _____ directly supervise unlicensed persons at school locations, in accordance with Colorado's Physical Therapy Practice Act, to facilitate a student's ability to participate in the educational process.

7.04(5) The school physical therapist is knowledgeable about how to create, communicate in and sustain effective collaborative relationships with relevant individuals, families, schools and communities and is able to:

7.04(5)(a) _____ communicate respectfully and sensitively to students and adults;_-

7.04(5)(b) _____ communicate effectively with students, families, teachers and other professionals including those from the private sector to appropriately plan for a student's services and to avoid duplication of service(s);_-

7.04(5)(c) _____ communicate with relevant providers and educators about the functional impact of students' disabilities on the ability to perform within the school environment;_-

7.04(5)(d) _____ identify resources and strategies that promote effective partnerships with individuals, families, school personnel and community representatives;_-

7.04(5)(e) _____ teach, facilitate, coordinate, schedule and provide supervision to paraprofessionals, other staff members and family members/guardians, as appropriate, to ensure that the IEP and/or IFSP is effectively implemented;_-

7.04(5)(f) _____ serve as an advocate for student's right to the least restrictive environment in an appropriate public education;_-

7.04(5)(g) _____ collaborate with colleagues and the school team to establish, write and measure appropriate and relevant student outcomes that are consistent with the functional skills that must be acquired by students so that they become as independent as possible within the educational environment, at home and/or in the community; and_-

7.04(5)(h) _____ facilitate and/or assist in the development of the effective transition of students from one setting to another in collaboration with the students, their families/guardians or other professionals including community representatives to promote a continued level of functional performance at the new setting.

7.04(6) The school physical therapist is knowledgeable about the ethical and legal standards of physical therapy practice in the state of Colorado and is able to:

7.04(6)(a) _____ recognize and address in planning the effect of cultural bias on practice;_-

7.04(6)(b) _____ evaluate and apply current effective evidence-based practice related to school physical therapy;_-

7.04(6)(c) _____ practice within the ethical and legal standards of the practice of physical therapy according to Colorado's Physical Therapy Practice Act and the American Physical Therapy Association's standards and policies, and demonstrate compliance with the most current physical therapy code of ethics of the American Physical Therapy Association; and_-

7.04(6)(d) _____ routinely evaluate and measure personal performance as a physical therapist to ensure therapeutic efficacy and achievement of appropriate outcomes, and participate in professional development and professional organizations which lead to increased knowledge and growth in skills and abilities.

7.05 School Nurse (Ages Birth–21)

To be endorsed as a school nurse, an applicant must hold an earned associate's, bachelor's or higher degree in nursing from an accepted institution of higher education or one have successfully completed 3 years of practical experience working with school-aged children and completed a nursing education program for a Registered Nurse (RN) or Bachelor's of Science in Nursing (BSN) program recognized by the U.S. Secretary of Education as a specialized accrediting agency, such as but not limited to the Commission on Collegiate Nursing Education (CCNE) or the Accreditation Commission for Education in Nursing (ACEN); have successfully completed the requirements for and; and hold a valid RN license to practice professional nursing in Colorado pursuant to the provisions of the Colorado Nurse Practice Act (section 12-38-101, et. seq., C.R.S.) or hold a license in another state and a valid multi-state license and able to practice be practicing in Colorado pursuant to the nurse Nurse licensing Licensure Compact (section 24-60-3202, C.R.S.); have successfully completed field experiences and a supervised practicum as prescribed by the preparing institution, including experiences with school-age children in a community health/public health or school setting.

The initially licensed school nurse must participate in an approved induction program that will enable the nurse to be knowledgeable about and able to demonstrate the competencies specified below, which have been endorsed by the American Nurses' Association and the National Association of School Nurses as standards of care and the standards of professional performance for school nurses.

7.05(1) The school nurse is knowledgeable about the standards of care of school nursing practice and is able to:

7.05(1)(a) _____ assess student health status using data collected from the student, parent, school staff and other relevant health care providers; _____

7.05(1)(b) _____ conduct basic screening programs to identify potential health issues that may affect a child's ability to learn; _____

7.05(1)(c) _____ conduct physical assessments and specific screening tests, counseling and conferencing to determine the physical, social and mental status of the student; and

7.05(1)(d) _____ assess the school environment and program(s) to determine modifications that are necessary to address student health and safety needs.

7.05(2) The school nurse has the knowledge to make nursing diagnoses and is able to:

7.05(2)(a) _____ validate student, family and group assessment data; _____

7.05(2)(b) _____ interpret health history information, medical reports, nursing observations and test results using educational terminology; and

7.05(2)(c) _____ establish student and school health care priorities.

7.05(3) The school nurse has the knowledge of how to set health priorities in the school setting and is able to:

7.05(3)(a) _____ evaluate health outcomes of school environment and program changes and create situation-specific methods of results-measurement; _____

7.05(3)(b) _____ assess the cultural health beliefs of students to determine the impact on health care delivery, health care compliance and on education in the classroom; and

7.05(3)(c) _____ identify resources needed to achieve objectives and establish time frames and criteria to measure results.

7.05(4) The school nurse is knowledgeable about planning and is able to:

7.05(4)(a) _____ review assessment information and relate findings to functioning levels and needs of students within the school setting; _____

7.05(4)(b) _____ develop a school health care plan to meet students' individual health needs within the school setting; _____

7.05(4)(c) _____ develop a plan to promote health and wellness and reduce risk factors within the school setting; and _____

7.05(4)(d) _____ collaborate with school personnel, community professionals and other resources to plan health-related and informational activities for students, educational staff and relevant others.

7.05(5) The school nurse is knowledgeable about plan implementation and is able to:

7.05(5)(a) _____ manage health care plans for students with identified special health needs within the school setting; _____

7.05(5)(b) _____ provide direct delivery of health services for students, when and if appropriate; _____

7.05(5)(c) _____ delegate to, train and supervise appropriate school personnel to implement specific health care procedures; _____

7.05(5)(d) _____ help clients to obtain resources and services; _____

7.05(5)(e) _____ adhere to professional standards and state regulations; and _____

7.05(5)(f) _____ coordinate care to meet the health needs of students, their families and related vulnerable populations.

7.05(6) The school nurse is knowledgeable about evaluation for purposes of plan updating and is able to:

7.05(6)(a) _____ monitor progress toward meeting student health care plan outcomes and revise plans as needed to meet identified ongoing or emerging needs of the student; _____

7.05(6)(b) _____ evaluate school or district health care policies and procedures, counseling and classroom teaching outcomes; _____

7.05(6)(c) _____ evaluate health care delivery models; and _____

7.05(6)(d) _____ monitor health outcomes of school environment and program changes.

7.05(7) The school nurse is knowledgeable about what constitutes quality of care and is able to:

7.05(7)(a) _____ develop recommendations to enhance the school environment and/or to modify a school program to meet student health and safety needs; _____

7.05(7)(b) _____ evaluate school staff trained to carry out designated health care procedures; and _____

7.05(7)(c)_____ participate in quality assurance activities, such as the development of relevant policies and procedures.

7.05(8) The school nurse is knowledgeable about performance appraisal and is able to:

7.05(8)(a)_____ effectively appraise performance through constructive comments from peers and supervisors, self-assessment and adherence to relevant regulations; and_____

7.05(8)(b)_____ develop personal goals for professional development.

7.05(9) The school nurse is knowledgeable about professional development and participates in relevant continuing education programs.

7.05(10)_____ The school nurse is knowledgeable about the necessity for collegiality in the school setting to meet the health needs of students and relevant needs of their families related to student achievement, and is able to:

7.05(10)(a)_____ collaborate with school personnel, students, parents, primary health care providers and relevant others to establish an effective reciprocal referral system;_____

7.05(10)(b)_____ participate as a member of an interdisciplinary school health and/or relevant education team to positively affect student well-being; and_____

7.05(10)(c)_____ participate in appropriate and relevant professional and community organizations.

7.05(11)_____ The school nurse is knowledgeable about the ethics of the profession and is able to:

7.05(11)(a)_____ demonstrate through application an understanding and incorporation of professional standards and state regulations in an education and/or health care setting;_____

7.05(11)(b)_____ recognize the need for and maintain confidentiality; and_____

7.05(11)(c)_____ recognize and demonstrate respect for students' and families' cultural health care beliefs and student and family autonomy and rights.

7.05(12)_____ The school nurse is knowledgeable about the positive aspects of collaboration and is able to:

7.05(12)(a)_____ articulate clearly the value and role of the nurse in the school setting;_____

7.05(12)(b)_____ work within the organizational structures that influence the delivery of school health services and be an advocate for the health and well-being of students within the school setting; and_____

7.05(12)(c)_____ act as liaison between school, community health agencies, care providers, parents and students to meet the objectives of student health care plans.

7.05(13)_____ The school nurse is knowledgeable about applicable research and is able to:

7.05(13)(a)_____ base practice on current knowledge, theory and research on which there is documented evidence of effectiveness; and_____

7.05(13)(b)_____ participate in ongoing relevant research activities.

7.05(14)_____The school nurse is knowledgeable about resource utilization and is able to:

7.05(14)(a)_____assess the economic, legal and political factors that influence health care delivery in schools and communities and constructively address applicable factors within the school setting; ~~and~~.

7.05(14)(b)_____collaborate with community agencies to reduce duplication and expand resources.

7.05(15)_____The school nurse is knowledgeable about communication, including non-verbal communication, and its effect, and is able to:

7.05(15)(a)_____articulate issues clearly to a wide variety of audiences in a wide variety of situations and settings; ~~;~~

7.05(15)(b)_____interpret health history information, medical reports, nursing observations and test results, and communicate clearly to appropriate staff and/or students and/or their families; ~~;~~

7.05(15)(c)_____document interventions accurately in a timely way and in a retrievable and understandable format; ~~and~~.

7.05(15)(d)_____effectively use technology to acquire up-to-date information and to expand skills and resources.

7.05(16)_____The school nurse is knowledgeable about program management and is able to:

7.05(16)(a)_____develop effective community partnerships and a wide range of accessible resources; ~~;~~

7.05(16)(b)_____design disease prevention and health promotion strategies and programs for students, their families, when appropriate, and other relevant staff; ~~;~~

7.05(16)(c)_____implement and oversee recommended modifications of the school environment and programs to meet identified student health and safety needs and to reduce injuries; ~~;~~

7.05(16)(d)_____provide health consultation, health education and health promotion for students, families, where appropriate, and staff to improve school attendance; ~~;~~

7.05(16)(e)_____advise and consult with other relevant health care providers as appropriate to address the needs of students within the school setting; ~~and~~.

7.05(16)(f)_____evaluate health care delivery models and apply relevant elements within the school setting.

7.05(17)_____The school nurse is knowledgeable about of health education and is able to:

7.05(17)(a)_____develop and effectively implement lesson plans pertinent to identified health education needs; ~~;~~

7.05(17)(b)_____assess student and staff education needs for relevant health information and provide staff with health education programs, information, resources and materials, developmentally appropriate for the student population being served, to promote health/wellness and to prevent illness and injury; ~~and~~.

7.05(17)(c)_____inform students and parents of patient rights.

7.05(18). — The school nurse shall self-assess the effectiveness of practice, direction and/or supervision based on the well-being, needs and achievement of students and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.

7.06 School Psychologist (Ages Birth-21)

To be endorsed as a school psychologist, an applicant must have: completed an approved specialist-level (Ed.S.) program with a minimum of 60 graduate semester hours or a doctoral program for the preparation of school psychologists serving children/students ages 0-21 at an accepted institution of higher education; have successfully completed practicums (consisting of a sequence of closely supervised on-campus or field-based activities, designed to develop and evaluate a candidate's mastery of distinct professional skills, consistent with program and/or course goals); have successfully completed an internship (consisting of a full-time experience over one year or half-time over two consecutive years, with a minimum of 1,200 clock-hours, of which at least 600 must be in a school setting and which requires a candidate to demonstrate, under supervision, the ability to provide a wide range of outcome-based school psychological services, and 600 hours in other acceptable internship experiences including private, state-approved education programs or other appropriate mental health or education-related programs); and have passed the state-approved content exam.

An applicant who holds a valid National Certified School Psychologist (NCSP) credential satisfies these requirements. An applicant who holds a valid license to practice in Colorado pursuant to Part Three of the Mental Health Act (section 12-245-301, et seq., C.R.S.) or a valid license issued by another state and able to practice in Colorado pursuant to the Psychology Interjurisdictional Compact (section 24-60-3902, et seq., C.R.S.), or is eligible to sit for licensure examinations to obtain these credentials, may provide an institutional recommendation from an approved school psychology program verifying the applicant's acquisition of the competencies listed in these rules, including completion of an appropriate internship and a passing score on the state-approved content exam, to satisfy these requirements.

- (a) — completed an approved specialist-level program with a minimum of 60 graduate semester hours or a doctoral program for the preparation of school psychologists, serving children/students, ages birth-21, at an accepted institution of higher education;
- (b) — passed the national school psychology examination;
- (c) — successfully completed practicums (consisting of a sequence of closely supervised on-campus or field-based activities, designed to develop and evaluate a candidate's mastery of distinct professional skills, consistent with program and/or course goals);
- (d) — successfully completed an internship (consisting of a full-time experience over one year, or half-time over two consecutive years, with a minimum of 1200 clock-hours, of which at least 600 hours must be in a school setting which requires a candidate to demonstrate, under supervision, the ability to integrate knowledge and skills in all the professional practice standards, and to provide a wide range of outcome-based school psychological services; and may include, beyond the 600 hours in the school setting, other acceptable internship experiences including in private, state-approved educational programs or in other appropriate mental health or education-related programs); and
- (e) — a valid National Certified School Psychologist (NCSP) credential, issued by the national school psychology certification board; or
- (f) — if an applicant holds a valid license issued by the Colorado State Board of Psychologist Examiners per department of regulatory agencies rules, or is eligible to sit for licensure examinations, that applicant must provide an institutional recommendation from the professional education unit of an accepted institution of higher education with an

~~approved school psychology program, verifying that the applicant has acquired the specified competencies listed in these rules, including completion of an appropriate internship and have achieved a passing score on the national school psychology examination.~~

- 7.06(1) The school psychologist is knowledgeable about human learning processes from infancy to young adulthood, techniques to assess these processes, and direct and indirect services applicable to the development of cognitive and academic skills; and is able to:
- 7.06(1)(a) ~~_____~~ apply learning, motivation and developmental theories to improve learning and achievement for all children/student~~s~~.
 - 7.06(1)(b) ~~_____~~ utilize developmentally appropriate practices that support the education of children/students ages birth-21 with disabilities or delays in development~~;~~.
 - 7.06(1)(c) ~~_____~~ use results from ongoing assessment(s) in the development of appropriate cognitive and academic goals for children/students with differing abilities, disabilities, strengths and needs~~;~~.
 - 7.06(1)(d) ~~_____~~ implement interventions such as consultation, behavioral assessment/intervention and counseling to achieve student goals~~;~~ and
 - 7.06(1)(e) ~~_____~~ evaluate the effectiveness of interventions and modify as necessary and appropriate.
- 7.06(2) The school psychologist is knowledgeable about a wide variety of models and methods of informal and formal assessment across ages birth-21 that can identify strengths and needs, and measure progress and functioning, in school, home and community environments, and is able to:
- 7.06(2)(a) ~~_____~~ select evaluation methods and instruments that are most appropriate and based upon effective up-to-date measurement theory and research~~;~~.
 - 7.06(2)(b) ~~_____~~ implement a systematic process to collect data including, but not limited to, test administration; interviews and observations; behavioral, curriculum- and play- based assessments and ecological or environmental evaluations.
 - 7.06(2)(c) ~~_____~~ translate assessment results into empirically based decisions about service delivery to promote child/student achievement.
 - 7.06(2)(d) ~~_____~~ evaluate the outcomes of programs and services incorporating appropriate and relevant research design, statistics and methodology.
- 7.06(3) The school psychologist is knowledgeable about typical and atypical human developmental processes from birth to adulthood; the techniques to assess these processes; and the application of direct and indirect services for individuals, groups and families and, in collaboration with others, is able to:
- 7.06(3)(a) ~~_____~~ develop appropriate behavioral, affective, adaptive, social and transition goals for students of varying abilities, disabilities, strengths and needs.
 - 7.06(3)(b) ~~_____~~ implement interventions and services including, but not limited to, consultation, behavioral assessment and intervention, counseling and interagency collaboration based on identified goals~~;~~ and

- 7.06(3)(c) _____ evaluate the intervention(s) and modify as needed and appropriate to increase and assure effectiveness.
- 7.06(4) The school psychologist is knowledgeable about individual diversity, abilities and disabilities, and the influence of social, cultural, ethnic, socio-economic, gender-related and linguistic factors on development, learning and behavior, and is able to:
- 7.06(4)(a) _____ identify biological, cognitive, affective, developmental, social and cultural bases that contribute to individual differences. ;
- 7.06(4)(b) _____ identify risk and resiliency factors. ;
- 7.06(4)(c) _____ recognize psychopathology and articulate its potential influence on school functioning. ;
- 7.06(4)(d) _____ demonstrate the sensitivity, skills and respect necessary to work with diverse types of individuals and families. ;
- 7.06(4)(e) _____ display respect for diversity in social and cultural backgrounds and linguistic differences when working with families, school personnel and community agencies. ; [and](#)
- 7.06(4)(f) _____ select and/or adapt prevention and intervention strategies based on individual characteristics, strengths and needs to improve learning, achievement and adaptive functioning for all children/students.
- 7.06(5) The school psychologist is knowledgeable about general education, special education, other educational and related services, the importance of multiple systems and their interactions, and organizational practices that maximize learning, and is able to:
- 7.06(5)(a) _____ develop and implement policies and practices that create and maintain safe, supportive and effective learning environments. ;
- 7.06(5)(b) _____ participate in and facilitate school reform efforts. ; [and](#)
- 7.06(5)(c) _____ translate federal and state law, state rules and regulations and local policy into building- and district-level practice.
- 7.06(6) The school psychologist is knowledgeable about models of effective evidence-based programs as related to health promotion; school safety; and primary, secondary and tertiary intervention, and is able to:
- 7.06(6)(a) _____ implement school-wide prevention and intervention programs which may include, but are not limited to, individual and group counseling, affective education and positive behavior interventions and supports to promote the mental health, physical well-being and the achievement of children/students of all ages. ;
- 7.06(6)(b) _____ participate in risk assessments and crisis response planning, to promote and maintain school safety. ; [and](#)
- 7.06(6)(c) _____ respond effectively to crisis situations.
- 7.06(7) The school psychologist is knowledgeable about collaboration and consultation models and methods and their applications in school, family and community systems, and is able to:

- 7.06(7)(a) ~~_____~~ consult and collaborate effectively with children/students, school personnel, families and community professionals to promote and provide comprehensive services to children and families and to advance student achievement~~_____~~.
 - 7.06(7)(b) ~~_____~~ communicate information that is readily understandable to students, families, educators and community members during meetings, in-services and consultations~~_____~~.
 - 7.06(7)(c) ~~_____~~ promote family involvement in education and service delivery~~_____~~.
 - 7.06(7)(d) ~~_____~~ collaborate with families and other service providers to meet the needs of infants, toddlers and preschoolers in home and community settings~~_____~~ and.
 - 7.06(7)(e) ~~_____~~ link community resources that serve infants, toddlers, children, adolescents, young adults and their families and facilitate children's/students' transitions across various service delivery systems.
- 7.06(8) The school psychologist is knowledgeable about the history and foundations of school psychology, standards for legal and ethical practice, evidence-based service models and methods and public policy, and is able to:
- 7.06(8)(a) ~~_____~~ demonstrate professional leadership that exemplifies a personal and professional commitment to ethical, professional and legal standards~~_____~~.
 - 7.06(8)(b) ~~_____~~ practice in accordance with all applicable federal and state statutes, rules, regulations and local policies, especially those concerning due process, informed consent, privacy rights and confidentiality~~_____~~.
 - 7.06(8)(c) ~~_____~~ integrate information sources and current technology to enhance quality of service~~_____~~.
 - 7.06(8)(d) ~~_____~~ utilize data-based decision-making in all aspects of professional practice~~_____~~.
 - 7.06(8)(d) ~~_____~~ maintain professional preparation, development and supervision as related to the population served~~_____~~ and.
 - 7.06(8)(e) ~~_____~~ contribute professionally to the advancement of school psychology.
- 7.06(9) The school psychologist shall self-assess the effectiveness of practice, direction and/or supervision based on the well-being and achievement of students and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.

7.07 School Social Worker (Ages Birth-21)

To be endorsed as a school social worker, the candidate must hold an earned master's or higher degree in social work from an accepted institution of higher education; including a supervised, 900 clock-hour practicum in the field of social work, which must have been completed in a school, social service agency, mental health clinic or facility and/or hospital setting and which should enable the social worker to synthesize and apply a broad range of relevant knowledge and skills, include opportunities to analyze, intervene and evaluate in ways that are highly differentiated, discriminating and self-critical, and differentially refine the candidate's communication skills with a variety of client populations, colleagues and members of the community; have successfully completed at least 200 hours working with school-age children/students; and have documented evidence of completion of coursework in the areas of school and special education law, including content covering Functional-functional Bbehavior Aassessment (FBA) and the development of behavior intervention plans; have successfully completed one of the following—

the Colorado Assessment for Licensed Clinical Social Workers or the Colorado State Board of Education-adopted assessment for school social workers; have successfully completed a supervised, 900 clock-hour practicum in the field of social work, which must have been completed in a school, social service agency, mental health clinic or facility and/or hospital setting; and have successfully completed at least one field experience with school-age children/students and which should: enable the social worker to synthesize and apply a broad range of relevant knowledge and skills; include opportunities to analyze, intervene and evaluate in ways that are highly differentiated, discriminating and self-critical; and differentially refine the candidate's communication skills with a variety of client populations, colleagues and members of the community.

An applicant who holds valid Certified School Social Work Specialist (C-SSWS) certification from the National Association of Social Workers satisfies these requirements. An applicant who holds a license to practice in Colorado pursuant to Part Four of the Mental Health Practice Act (12-245-401, et. seq., C.R.S.) may meet endorsement requirements upon completion of coursework in school and special education law, functional behavior assessments and the development of behavior intervention plans.

7.07(1) The school social worker is knowledgeable about the history and foundations of school social work; standards for legal and ethical practice; proven-effective evidenced-based models and methods and public policy; and is able to:

7.07(1)(a) — demonstrate professional leadership and ethical practice in accordance with federal, state and local legislation, regulations and policies;

7.07(1)(b) — demonstrate personal and professional commitment to the values and ethics of the social work profession through application of the national association of social workers professional standards and code of ethics in ethical decision-making;

7.07(1)(c) — remain current regarding effective evidence-based practice;

7.07(1)(d) — apply federal, state and local legislation, regulations and policies to ethical and legal interventions;

7.07(1)(e) — establish priorities and models for the delivery of school social work services that include individual and group counseling, advocacy, case management, consultation and crisis intervention to meet the needs of all learners;

7.07(1)(f) — conduct in-services for faculty and staff on child protection and school attendance issues and develop other training and educational programs in collaboration with local community agencies and other pertinent entities in support of the goals and mission of the educational institution;

7.07(1)(g) — counsel parents and students about due process rights, as mandated by special education legislation, and advise school personnel so that they are knowledgeable about and able to meet their legal responsibilities to all students; and;

7.07(1)(h) — comply with the legal mandates of confidentiality and maintain adequate safeguards to protect the privacy and confidentiality of student and family information.

7.07(2) The school social worker is knowledgeable about systems change and is able to:

7.07(2)(a) — acquire or gain access to resources which can eliminate service deficiencies in the local education agency or in the community which negatively affect the ability of children/students to benefit from the educational system;

- 7.07(2)(b) _____ identify and collaborate with individuals who function as formal or informal leaders in their communities to develop and enhance networks that can complement the services of the local education and community agencies;_____
 - 7.07(2)(c) _____ identify areas of need not being addressed by the local education agency and community and work to initiate those services;_____
 - 7.07(2)(d) _____ document problems and recommend solutions to appropriate decision-makers in the local education agency or community;_____
 - 7.07(2)(e) _____ advocate for appropriate change among educators, other professionals and citizens and provide leadership on committees and advisory boards at local, state, regional and national level to assure that the needs of all learners are met;_____
 - 7.07(2)(f) _____ use mediation and conflict-resolution strategies to resolve children's/students' educational and parental concerns;_____and;_____
 - 7.07(2)(g) _____ document the need and advocate for policy change at the local, state, regional and national level that can empower children/students and their families to gain access to and effectively use formal and informal community resources.
- 7.07(3) The school social worker is knowledgeable about communication, consultation and collaboration and is able to:
- 7.07(3)(a) _____ act as a consultant to personnel and others in the local education agency, including members of school boards and representatives of the community, to promote understanding and effective utilization of school social work services;_____
 - 7.07(3)(b) _____ act as a consultant to teachers, parents and others to facilitate understanding of how factors in the home, local education agency and community affect children's/students' educational experience(s);_____
 - 7.07(3)(c) _____ act as a consultant on policy matters including but not limited to such issues as, discipline, suspension, expulsion, attendance, confidentiality, multicultural factors and child abuse and neglect;_____
 - 7.07(3)(d) _____ work collaboratively to develop cooperative service arrangements and to mobilize the resources of local education agencies and the community to meet the needs of children/students and families, and to serve as liaison between parents, community and school(s);_____
 - 7.07(3)(e) _____ as an effective member of an interdisciplinary team, bring unique skills, abilities and a systems perspective to the assessment and diagnosis of children's/students' needs;_____
 - 7.07(3)(f) _____ initiate and support activities that can assist in overcoming institutional barriers and gaps in service;_____
 - 7.07(3)(g) _____ demonstrate the professional skills, values and abilities necessary to facilitate the meeting of the objectives set by the interdisciplinary team to ensure student success;_____
 - 7.07(3)(h) _____ provide appropriate case planning and management services and coordinate service planning with school and/or district and community personnel;_____

7.07(3)(i) _____ through modeling and coaching teach individuals to be effective group members, in therapeutic groups or in task-oriented work groups; ~~and~~.

7.07(3)(j) _____ effectively advocate for children/students and their families in a variety of circumstances which may have a negative effect on learning including, but not limited to, those related to suspension and expulsion, discrimination, immigration, homelessness, chronic, acute and communicative diseases and other health issues; substance abuse and other at-risk conditions.

7.07(4) The school social worker is knowledgeable about educational planning and is able to:

7.07(4)(a) _____ ensure that children's/students' educational plans are based on assessments relevant to the concerns raised in the referral and include goals, objectives and interventions to achieve desired outcomes, methods of evaluation and outcome criteria; ~~;~~

7.07(4)(b) _____ ensure that plans are designed to enhance children's/students' positive educational experiences and involve the family, other team members and school and community resources, as appropriate; ~~;~~

7.07(4)(c) _____ provide services to children/students that build on individual strengths and maximize opportunities to participate in the planning process and in directing the learning experience; ~~;~~

7.07(4)(d) _____ develop and implement an intervention plan or, when the most suitable types of intervention are not available, design an alternative plan intended to enhance children's/students' ability to benefit from their educational experience; ~~;~~

7.07(4)(e) _____ conduct culturally sensitive assessments and participate in IEP planning for and service delivery to all learners; ~~and~~.

7.07(4)(f) _____ incorporate into the educational planning process appropriate curricula and approaches to teaching and learning acceptable in the context of the local education agency.

7.07(5) The school social worker is knowledgeable about prevention and intervention and is able to:

7.07(5)(a) _____ use basic helping skills including, but not limited to, interviewing, questioning and counseling to assist children/students and/or families in addressing problems they are experiencing with social functioning and the effects of such actions on student achievement, by working with them to develop alternative strategies based on clearly defined, evidence-based treatment modes or models; ~~;~~

7.07(5)(b) _____ counsel students and parents about actions which interfere with effective education and student achievement; ~~;~~

7.07(5)(c) _____ conduct small group activities which can serve as environments for teaching children/students effective daily living skills and as conduits for communicating information intended to enhance social functioning or the facilitation of problem resolution; ~~;~~

7.07(5)(d) _____ conduct classroom programs, when indicated, that can provide students with affective knowledge and skills; ~~;~~

7.07(5)(e) _____ conduct parent groups, as appropriate and indicated, relevant to their support of student achievement; ~~;~~

- 7.07(5)(f) _____ implement appropriate school intervention and prevention programs in response to demonstrated need to ensure a safe and civil learning environment for all students, which may include, but need not be limited to, crisis intervention, conflict resolution and substance abuse prevention;_____
- 7.07(5)(g) _____ complete in-depth psychosocial assessments of children/students and of family functioning as related to planning for the improvement of student achievement;_____
- 7.07(5)(h) _____ develop measurable and appropriate behavioral, affective, adaptive, social and academic objectives for students with varying abilities, disabilities, strengths and needs;_____
- 7.07(5)(i) _____ treat those in need or in crisis situations with respect, empathy, dignity and a consistently positive approach to problem resolution; and_____
- 7.07(5)(j) _____ utilize family strengths and structure(s) to enable families to function as advocates for themselves and for their children's education and well-being.

7.07(6) The school social worker is knowledgeable about social and cultural foundations and is able to:

- 7.07(6)(a) _____ apply proven theories of human growth and development related to students, ages birth-21 including, but not limited to, learning systems, communications, social learning and behavioral theory in working with children/students;_____
- 7.07(6)(b) _____ incorporate diversity factors and the special educational needs of culturally and linguistically different populations into the planning process for students;_____
- 7.07(6)(c) _____ ensure that children and their families are provided services within the context of multicultural understanding and with consideration given to addressing the sensitivities that enhance families' support of children's learning experiences;_____
- 7.07(6)(d) _____ conduct culturally sensitive assessments of problem learning areas and recommend interventions to meet needs and to promote student achievement;_____
- 7.07(6)(e) _____ demonstrate the ability to select and/or adapt strategies based on the needs of at-risk children/students and those with identified disabilities;_____
- 7.07(6)(f) _____ address in planning biological and environmental factors which affect children's/students' ability to function effectively and to achieve in school;_____
- 7.07(6)(g) _____ identify racial and ethnic barriers within the local education agency and develop strategies to lessen and overcome the negative effects of such barriers on children/students and on the learning climate of the local education agency; and_____
- 7.07(6)(h) _____ create opportunities for students and staff to recognize diversity in positive ways and to facilitate the understanding and acceptance of cultural and other influencing differences.

7.07(7) The school social worker is knowledgeable about assessment and is able to:

- 7.07(7)(a) _____ assist local education agencies in the identification of students needing specialized and or support services;_____
- 7.07(7)(b) _____ perform need-assessments as the foundation of effective program planning for children/students and families that include, but are not limited to:

- 7.07(7)(b)(i) —a study of bio-psychosocial factors that may interfere with the children's/students' adjustment to and performance in school and which may involve assessment(s) of the student's physical, cognitive and emotional development and adaptive behavior as manifested in the family's related history;
 - 7.07(7)(b)(ii) —assessment of the student's behavior and attitudes in a variety of settings;
 - 7.07(7)(b)(iii) —assessment of the patterns of the child's/student's interpersonal relationships as observed in the family, local education agency and community settings;
 - 7.07(7)(b)(iv) —assessment of the aspects of the biological, medical, psychological, cultural, sociological, emotional, legal and environmental factors that affect reports on the student's behavior by teachers and other personnel in their roles with/within the local education agency;
 - 7.07(7)(b)(v) —identification of formal and informal policies of the local education agency and other institutional factors that may affect the student's behavior;
 - 7.07(7)(b)(vi) —assessment of patterns of achievement and adjustment at critical points in the child's/student's growth and development; and
 - 7.07(7)(b)(vii) —assessment of the existence of, accessibility to and utilization of community resources for children/students and families.
 - 7.07(7)(c) —incorporate students' needs-assessment information into and write a comprehensive, timely and appropriate social-developmental history;
 - 7.07(7)(d) —utilize appropriately administered formal and informal objective measures including but not limited to measures of adaptive and functional behavior, self-esteem, social skills, attitudes, emotional health and interests; and.
 - 7.07(7)(e) —consider placement and service options for students in a variety of contexts.
- 7.07(8) The school social worker is knowledgeable about current effective research and program evaluation and is able to:
- 7.07(8)(a) —maintain accurate data and records relevant to the planning, management and evaluation of the school social work program;
 - 7.07(8)(b) —maintain ongoing assessments of evidenced-based, educationally related social programs implemented in the local education agency, related community and in the region, which address such issues as, but not limited to, students dropping out of school or having poor attendance, advocate for program changes to address such issues and participate in program development and implementation processes, as appropriate;
 - 7.07(8)(c) —engage in critical self-evaluation to assess efficacy and to improve skills and service delivery;
 - 7.07(8)(d) —collect, analyze and publish data and present technical information to a variety of audiences and in a variety of contexts, including the general public, public officials, elected and appointed, and/or other decision-makers and policymakers responsible for programs and for program changes that can effect public education and related child welfare matters;

7.07(8)(e) _____ assume responsibility for continuing to develop a knowledge base and the skills necessary to remain current in the field and to develop and gain access to support systems that enhance personal growth and professional identity; ~~and-~~

7.07(8)(f) _____ participate in professional and community organizations as relevant and appropriate.

7.08 School Speech-Language Pathologist (Ages Birth-21)

To be endorsed as a school speech-language pathologist, an applicant must hold an earned master's or higher degree in communication disorders or speech-language pathology from an [American Speech-Language-Hearing Association-approved Council on Academic Accreditation-accredited program at an accepted institution of higher education](#); ~~have completed a school speech-language pathology program accredited by the Council on Academic Accreditation (CAA) in the audiology and speech-language pathology of the American Speech-Language-Hearing Association (ASHA)~~; have passed ~~a the national~~ state-approved speech-language pathologist ~~specialty-area~~ test; have successfully completed a practicum or internship with children/students ages birth-21 in a school setting, equivalent to a minimum of eight weeks full-time, under the supervision of a professionally licensed school speech-language pathologist; and must demonstrate the competencies specified below.:

[An applicant who holds valid ASHA Clinical Certification of Competence, a valid license to practice in Colorado pursuant to the Speech-language Pathology Practice Act \(section 12-305-101, et. seq., C.R.S.\) or a valid license issued by another state and able to practice in Colorado pursuant to the Audiology and Speech-language Pathology Interstate Compact \(section 24-60-4202, C.R.S.\), and who also meets the practicum experience requirement above, satisfies these requirements.](#)

7.08(1) The school speech-language pathologist is knowledgeable about basic human communication, including swallowing processes, and biological, neurological, acoustic, psychological, developmental, linguistic and cultural bases, and must incorporate into planning for students:

7.08(1)(a) _____ the analysis, synthesis and evaluation of information related to basic human communication and its processes.:

7.08(1)(b) _____ utilization of knowledge about normal development in the identification of delayed/disordered speech and language skills' ~~and-~~

7.08(1)(c) _____ information about the interrelated and interdependent components of communication as related to its impact on the learner across environments.

7.08(2) The school speech-language pathologist is knowledgeable about the principles and methods of prevention of communication and swallowing disorders for students (ages birth-21), including consideration of anatomical/physiological, psychological, developmental, and linguistic and cultural correlates of the disorders, and is able to:

7.08(2)(a) _____ analyze, synthesize and evaluate the nature of speech, language, hearing and communication disorders, including swallowing disorders, and other differences including, but not limited to:

7.08(2)(a)(i) _____ the etiologies, characteristics and anatomical/physiological, acoustic, psychological, developmental and linguistic and cultural correlates, in each of the following:

7.08(2)(a)(i)(A) _____ articulation, fluency, and voice and resonance, including respiration and phonation;

7.08(2)(a)(i)(B) receptive and expressive language including, but not limited to, phonology, morphology, syntax, semantics, and pragmatics, in speaking, listening, reading, writing and manual modalities;

7.08(2)(a)(i)(C) hearing including its impact on speech and language;

7.08(2)(a)(i)(D) swallowing including oral, pharyngeal, esophageal and related functions, and the oral function of feeding;

7.08(2)(a)(i)(E) cognitive aspects of communication, such as attention, memory, sequencing, problem-solving and executive functioning;

7.08(2)(a)(i)(F) the social aspects of communication, such as challenging behavior, ineffective social skills and lack of communication opportunities; and

7.08(2)(a)(i)(G) communication modalities, such as oral, written, manual, augmentative and alternative communication techniques and assistive technologies.

7.08(2)(b) — articulate to a variety of stakeholders the role of oral language as a precursor to research-based literacy development, including information related to reciprocal spoken/written language relationships, and reading and writing as acts of communication and as tools of learning;

7.08(2)(c) — differentiate between classroom oral language content, form and use, and conversational language;

7.08(2)(d) — identify traits of typical reading and writing development in the context of the general education curriculum;

7.08(2)(e) — act as a resource to schools, parents and the community regarding all aspects of communication;

7.08(2)(f) — model and articulate the overall importance of communication and its relationship to academic achievement;

7.08(2)(g) — collaborate with other professionals to identify risk factors related to communication development among students ages birth-21;

7.08(2)(h) — conduct screening, prevention and intervention procedures;

7.08(2)(i) — identify and monitor added literacy risks for students being treated for spoken language difficulties; and

7.08(2)(j) — monitor classroom progress and other factors that justify formal referral for assessment.

7.08(3) The school speech-language pathologist is knowledgeable about principles and methods of evaluation of communication and communication disorders for students ages birth-21, and is able to:

7.08(3)(a) — participate on child study teams as an active member of the decision-making process for special education referrals;

7.08(3)(b) — collaborate with assessment teams in the utilization of a broad repertoire of formal and informal assessment strategies to help identify students' strengths and challenges with the various aspects of communication;

7.08(3)(c) — evaluate the psychometric characteristics of formal and informal assessment instruments.

7.08(3)(d) — select developmentally, culturally and linguistically appropriate formal and informal assessment tools and procedures to identify needs of students suspected of having difficulties in communication.

7.08(3)(e) — analyze assessment data to determine students' specific communication needs and eligibility for services, and for incorporation into individual educational plans (IEPs).

7.08(3)(f) — interpret data clearly in verbal and written form for a wide range of audiences, including educators, related professionals, families and students, where appropriate.

7.08(3)(g) — integrate assessment information from other professionals in the eligibility decision-making process.

7.08(3)(h) — consult with government agencies, teachers, school administrators and other health professionals on indications, timing, need and use of diagnostic assessments; and.

7.08(3)(i) — collaborate with assessment teams regarding evaluation strategies to identify whether a language difference or disorder might be at the root of concerns related to difficulty in a student's acquisition of literacy and/or any of its essential skills.

7.08(4) The school speech-language pathologist is knowledgeable about evidence-based and best-practice techniques, procedures and tools for intervention and remediation of communication disorders, including augmentative/alternative/assistive technology, and is able to:

7.08(4)(a) — plan and implement an appropriate service-delivery model for each identified student based on assessment results.

7.08(4)(b) — comply with federal, state and local laws, rules, policies, guidelines procedures and relevant case law.

7.08(4)(c) — model and demonstrate the use of augmentative/alternative/assistive technology.

7.08(4)(d) — be accountable through the collection of timely and appropriate data and the maintaining of accurate and timely records.

7.08(4)(e) — identify and gain access to sources of, and synthesize and translate common principles of, research and documented evidence-based and proven best practices related to the planning for and the implementation of intervention plans and strategies.

7.08(4)(f) — implement current state-of-the-art technology to maximize students' communication skills.

7.08(4)(g) — adapt general and special education curriculum to meet the requirements of individual students with regard to Colorado Academic Standards and access skills.

7.08(4)(h) — work collaboratively with students, general education teachers, school personnel, families and the community to provide integrated communication services.

7.08(4)(i) — provide culturally and developmentally appropriate curriculum-relevant intervention based on identified needs and proven effective research and practice.

7.08(4)(j)_____develop setting-appropriate intervention plans with measurable and achievable goals to meet identified students' need(s); ~~and~~_____

7.08(4)(k)_____maintain a safe and effective learning environment conducive to student achievement.

7.08(5) The school speech-language pathologist is knowledgeable about ethical conduct and professional development and is able to:

7.08(5)(a)_____articulate the role of the speech-language pathologist as an integral part of the special education services team and the learning community;_____

7.08(5)(b)_____collaborate with teachers, parents and related personnel in case management in a flexible and professional manner;_____

7.08(5)(c)_____communicate effectively with families to maintain their involvement with the student's assessment and intervention team;_____

7.08(5)(d)_____utilize a range of interpersonal communication skills including, but not limited to, consultation, collaboration, counseling, listening, interviewing and teaming as appropriate to identification, prevention, assessment and/or intervention with students with suspected or identified communication disabilities;_____

7.08(5)(e)_____mentor and supervise speech-language pathology assistants, graduate student interns and other support personnel so that the communication needs of students are addressed effectively and confidentially;_____

7.08(5)(f)_____participate in professional development opportunities to improve skills, and educate other professionals regarding risk factors to students, involving all means of communication;_____

7.08(5)(g)_____conduct research, initiate requests or network with related professionals to acquire support as needed; ~~and~~_____

7.08(5)(h)_____routinely evaluate and measure personal performance as a speech/language pathologist to ensure professional efficacy and achievement of appropriate outcomes and participate in professional development and professional organizations to increase knowledge and growth in skills and abilities.

7.09 School Counselor (PreK-12)

To be endorsed as a school counselor, applicants must hold a master's or higher degree in school counseling from [a Council for Accreditation of Counseling and Related Educational Programs-accredited program at](#) a regionally accredited institution of higher education; ~~have successfully completed an approved program in school counseling as defined by accreditation by the Council for Accreditation of Counseling & Related Educational Programs~~ or demonstrate equivalent coursework and training experiences ~~as determined by the department; have passed a state-approved assessment in school counseling~~; have completed a minimum of 100 clock-hours of a practicum, scheduled throughout the program, and a 600 clock-hour internship, supervised by a licensed school counselor in a school setting with multiple grade levels of students. ~~The internship must that~~ provides opportunities for the candidate. ~~under the supervision of a licensed school counselor~~, to engage in a variety of activities that an effective school counselor would be expected to perform as identified in the 2016 Council for Accreditation of Counseling and Related Educational Programs Standards; ~~(Colorado School Counseling Standards) effective July 1, 2016, and accessible at , and not including any later amendments, and have passed the state-approved school counseling assessment.~~

7.09(1) The school counselor demonstrates mastery of and expertise in all aspects of school counseling and is able to:

7.09(1)(a) develop, organize, administer and evaluate school counseling programs;

7.09(1)(b) apply appropriate modalities for the school setting;

7.09(1)(c) [provide social-emotional learning and college, career and academic counseling to counsel](#)-students individually and in group settings;

7.09(1)(d) support and/or establish safe, inclusive, [equitable](#) and respectful environments that recognize the diversity and needs of the student population; and

7.09(1)(e) plan, deliver and monitor services and specially designed instruction that facilitate learning for all students.

7.09(2) The school counselor demonstrates leadership through collaboration with educators, administrators, families, and community organizations to advocate for students.

7.09(3) The school counselor shall self-assess the effectiveness the school counseling program, reflect on personal practice and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.

Editor's Notes

History

New rule eff. 08/14/2018.

New rule eff. [tbd]

DEPARTMENT OF EDUCATION

Colorado State Board of Education

RULES FOR THE ADMINISTRATION OF EDUCATOR LICENSE ENDORSEMENTS

1 CCR 301-101

[Editor's Notes follow the text of the rules at the end of this CCR Document.]

1.00 Statement of Basis and Purpose

The statutory basis for these rules is found in §§ 22-60.5-106 and 22-60.5-115, C.R.S. These rules establish the standards and criteria for the issuance of endorsements to licenses in subject areas or other areas of educational specialization for teachers, special services providers, principals and administrators.

2.00 General Licensing Regulations

The Colorado Department of Education has the sole authority to issue educator licenses and authorizations. Pursuant to 22-63-201 and 22-32-126, C.R.S., a Colorado license or authorization is required for employment as a teacher, special services provider or principal in a Colorado school or school district. All licenses and authorizations must be endorsed to indicate the grade levels/developmental levels and specialization area(s) which are appropriate to the applicant's preparation, training and experience.

2.01 Definitions

- 2.01(1) Accepted institution of higher education: An institution of higher education that offers at least the standard bachelor's degree and is recognized by one of the following regional associations: Western Association of Schools and Colleges; Northwest Association of Schools, Colleges and Universities; North Central Association of Colleges and Schools; New England Association of Schools and Colleges; Southern Association of Colleges and Schools; or Middle States Association of Colleges and Schools.
- 2.01(2) Administrator: Any person who may or may not be licensed, but who administers, directs or supervises an education instructional or education-related program, or a portion thereof, in any school or school district, or nonpublic school in the state and who is not the chief executive officer or an assistant chief executive officer of such school.
- 2.01(3) Approved induction program: A program of continuing professional development for initial license-holders that meets the requirements of the Colorado State Board of Education, and that upon completion leads to a recommendation for a professional license by the school district or districts, charter school, nonpublic school, or the institute providing such induction program.
- 2.01(4) Approved program of preparation: A program of study for the preparation of educators approved by the Colorado State Board of Education pursuant to § 22-60.5-121, C.R.S., and that, upon completion, leads to a recommendation for licensure by an accepted institution of higher education.
- 2.01(5) Board of education: The governing body authorized by law to administer the affairs of any school district in the state except junior and community college districts. "Board of education" also includes a board of cooperative services organized pursuant to 22-5-101, C.R.S.

- 2.01(6) Charter school: A charter school authorized by a school district pursuant to Part 1 of Article 30.5 of Title 22 or a charter school authorized by the state charter school institute pursuant to Part 5 of Article 30.5 of Title 22.
- 2.01(7) Colorado Academic Standards: The state academic standards that identify the knowledge and skills that a student should acquire as the student progresses from preschool through elementary and secondary education, as adopted by the State Board of Education pursuant to section 22-7-1005, C.R.S. The Colorado Academic Standards are available at www.cde.state.co.us.
- 2.01(8) Department of education or Department: The Colorado State Department of Education as defined in 24-1-115, C.R.S.
- 2.01(9) Diversity: The backgrounds of all students and school personnel.
- 2.01(10) Endorsement: The designation on a license or an authorization of grade level(s) or developmental level(s), subject matter or service specialization in accordance with the preparation, training and experience of the holder of such license or authorization. Endorsements typically reflect major areas of specialization.
- 2.01(11) Endorsement/specialty area: The sequence of courses and experiences in the academic or professional area that the education student plans to teach, for the grade level(s) or developmental level(s) at which the student plans to teach, and/or for the services that the student plans to provide. Examples of specialty areas include science (grades 7-12), elementary education (grades K-6), school counselor (ages birth-21), reading specialist (grades K-12) and physical education (grades K-12).
- 2.01(12) Institute: The state charter school institute created pursuant to section 22-30.5-503, C.R.S.
- 2.01(13) Knowledge base: The assumptions, theories and research findings which provide the foundations that support the model(s) on which the program is founded, articulated, implemented and evaluated.
- 2.01(14) Licensure: The official recognition by a state governmental agency that an individual has met state-mandated minimum requirements and is approved to practice as a duly certified/licensed educator in the state.
- 2.01(15) Mentor administrator: Any administrator who is designated by a school district or districts, charter school, nonpublic school, or the institute providing an approved induction program for initial administrator licensees, who has demonstrated outstanding administrative skills and school leadership and who can provide exemplary modeling and counseling to initial administrator license-holders participating in an approved induction program.
- 2.01(16) Mentor principal: Any principal who is designated by a school district or districts, charter school, nonpublic school, or the institute providing an approved induction program for initial principal license-holders, who has demonstrated outstanding principal skills and school leadership and who can provide exemplary modeling and counseling to initial principal license-holders participating in an approved induction program.
- 2.01(17) Mentor special services provider: any special services provider who is designated by a school district or districts, charter school, nonpublic school, or the institute providing an approved induction program for initial special services license-holders, who has demonstrated outstanding special services provider skills and school leadership and who can provide exemplary modeling and counseling to initial special services license-holders participating in an approved induction program.

2.01(18) Mentor teacher:

2.01(18)(a) A teacher designated by a school district, charter school, or nonpublic school, employing an alternative teacher, who has demonstrated outstanding teaching and school leadership and who can provide exemplary modeling and counseling to alternative teachers participating in an alternative teacher program; or

2.01(18)(b) Any teacher who is designated by a school district or districts, charter school, nonpublic school, or the institute providing an approved induction program for initial teacher license-holders, who has demonstrated outstanding teaching and school leadership and who can provide exemplary modeling and counseling to initial teacher license-holders participating in an approved induction program. 2.01(18)(c) A teacher does not need to hold a mentor teacher endorsement as described in Rule 4.24 in order to be designated by a school district or districts, charter school, nonpublic school or the institute as described in Rule 2.01(18)(a) and 2.01(18)(b).

2.01(19) Nonpublic School: Any independent or parochial school that provides a basic academic education. Neither the State Board of Education nor any local school board of education has jurisdiction over the internal affairs of any independent or parochial school in Colorado.

2.01 (20) Practicum: An intensive experience in which education students practice and demonstrate professional skills and knowledge. Student teaching and internships are examples of a practicum.

2.01(21) Principal: Any person who is employed as the chief executive officer or an assistant chief executive officer of any school in the state and who administers, directs or supervises the education instruction program in such school or nonpublic school.

2.01(22) Professional education unit: The college, university, school, department or other administrative body within the institution of higher education that is primarily responsible for the preparation of teachers and other professional education personnel.

2.01(23) School: Any of the public schools of the state.

2.01(24) School district: Any school district organized and existing pursuant to law, but does not include junior or community college districts. "School district" includes a board of cooperative services organized pursuant to 22-5-101, C.R.S.

2.01(25) Special services provider: Any person other than a teacher, principal or administrator who is employed by any school district, charter school, nonpublic school, or the institute to provide professional services to students in direct support of the education instructional program.

2.01(26) State Board of Education: The State Board of Education established by Section 1 of Article IX of the Constitution of the State of Colorado.

2.01(27) Student teaching: Part of the 800 hours of field experience required in a teacher preparation program, it is an in-depth, direct teaching experience conducted in a school and classroom setting. It is considered a culminating field-based experience for the basic teacher preparation program where candidates practice and demonstrate professional skills and knowledge.

2.01(28) Teacher: Any person employed to instruct students in any school or nonpublic school in the state.

3.00 Endorsement of Licenses or Authorization.

Licenses and authorizations must be endorsed to indicate the grade levels/developmental levels and specialization area(s) which are appropriate to the applicant's preparation, training and experience.

3.01 Initial Endorsements.

3.01(1) Initial endorsements must be based upon:

3.01(1)(a) recommendation by a Colorado accepted institution of higher education verifying the satisfactory completion of an approved program for the endorsement; or

3.01(1)(b) recommendation by an accepted out-of-state institution of higher education and compliance with rule 2.03(3) of 1 CCR 301-37 or

3.01(1)(c) evaluation of licenses issued upon foreign degree programs for comparability to Colorado's standards; and

3.01(1)(d) fulfilling the requirements outlined below:

3.01(1)(d)(i) for an elementary education endorsement (grades K-6), passage of a Colorado State Board of Education-approved elementary education content test.

3.01(1)(d)(ii) for a special education generalist endorsement (ages 5 -21):

3.01(1)(d)(ii)(A) verification of 24 semester hours of specific coursework completed at an accepted institution of higher education or the equivalent as determined by the Department of Education through a transcript or portfolio review. The portfolio may include, but is not limited to, verification of teaching experience in the requested endorsement area, experiences outside of schools, in-service or continuing education, standardized assessments and recommendations from experts in the endorsement/specialty area to be taught. Such academic credit and portfolio experiences must be consistent with the content preparation requirements in the appropriate endorsement area found in section 4.00 of these rules; and

3.01(1)(d)(ii)(B) passage of the Colorado State Board of Education-approved special education generalist assessment and passage of a Colorado State Board of Education-approved elementary exam.

3.01(1)(d)(iii) for secondary (grades 7-12) and all K-12 and endorsement areas for ages birth-8:

3.01(1)(d)(iii)(A) a degree in the endorsement area; or

3.01(1)(d)(iii)(B) verification of 24 semester hours of specific coursework completed at an accepted institution of higher education or the equivalent as determined by the Department of Education through a transcript or portfolio review. The portfolio may include, but is not limited to, verification of teaching experience in the requested endorsement area, experiences outside of schools, in-service or continuing education, standardized assessments, and recommendations from experts in the endorsement/specialty area to be taught. Such academic credit and portfolio experiences must be consistent with the content preparation requirements in the appropriate endorsement area found in section 4.00 of these rules; or

3.01(1)(d)(iii)(C) passage of the Colorado State Board of Education-approved assessment of content area knowledge relevant to the area of endorsement.

3.02 Additional Endorsements

Second or subsequent endorsements may be awarded by the Department based upon one of the following:

3.02(1) the completion of an approved program of preparation at an accepted institution of higher education, which includes completion of field experiences, student teaching or practicum or internship, unless waived by the approved institution pursuant to the following:

3.02(1)(a) a waiver of field experience, student teaching, practicum or internship may be granted upon verification of satisfactory experience in the area of endorsement being sought. Waivers of coursework or other program requirements may also be granted for work experience, including teaching or administrative experience in schools.

3.02(1)(b) institutions of higher education must have written criteria, procedures and due-process procedures for the recognition of competencies acquired through experience. Such criteria and due-process procedures must include a process for appealing the denial of a request for waiver of field experience, student teaching, practicum, internship or other coursework or program requirements.

3.02(1)(c) applicants who complete approved programs for additional endorsements must provide evidence of successful completion of the Colorado State Board of Education–approved assessment of content area knowledge in the endorsement area being sought where required.

3.02(2) academic preparation, experience or assessment for endorsements in section 4.00 of these rules:

3.02(2)(a) for elementary education endorsement (grades K-6):

3.02(2)(a)(i) passage of a Colorado State Board of Education-approved elementary content test.

3.02(2)(b) for a special education generalist endorsement (ages 5-21):

3.02(2)(b)(i) verification of 24 semester hours of specific coursework completed at an accepted institution of higher education or the equivalent as determined by the Department of Education through a transcript or portfolio review. The portfolio may include, but is not limited to, verification of teaching experience in the requested endorsement area, experiences outside of schools, in-service or continuing education, standardized assessments, and recommendations from experts in the endorsement/specialty area to be taught. Such academic credit and portfolio experiences must be consistent with the content preparation requirements in the appropriate endorsement area found in section 4.00 of these rules; and

3.02(2)(b)(ii) passage of the Colorado State Board of Education-approved special education generalist assessment and passage of a Colorado State Board of Education-approved elementary education exam.

3.02(2)(c) for secondary (grades 7-12) and all K-12 and endorsements areas for ages birth-8:

3.02(2)(c)(i) a degree in the endorsement area; or

3.02(2)(c)(ii) verification of 24 semester hours of specific coursework completed at an accepted institution of higher education or the equivalent as determined by the Department of Education through a transcript or portfolio review. The portfolio may include but is not limited to verification of teaching experience in the requested endorsement area, experiences outside of schools, in-service or continuing education, standardized assessments, and recommendations from experts in the endorsement/specialty area to be taught. Such academic credit and portfolio experiences must be consistent with the content preparation requirements in the appropriate endorsement area found in section 4.00 of these rules; or

3.02(2)(c)(iii) passage of the Colorado State Board of Education-approved assessment of content area knowledge relevant to the area of endorsement.

3.03 Development and Approval of New Endorsement Areas and Discontinuance of Endorsement Areas

3.03(1) The Colorado State Board of Education may establish by rule and regulation appropriate endorsements and the criteria for such endorsements.

3.03(2) The Department must utilize appropriate content area representatives from among the education community and interested stakeholders to develop recommendations for consideration by the State Board of Education with regard to the adoption of new endorsement areas or the discontinuance of endorsement areas that are no longer relevant or applicable to student needs.

3.03(3) In the event that the State Board of Education discontinues an endorsement that was previously offered, students who at the time of discontinuance are actively enrolled in a program for the discontinued endorsement must have five years from the date that the endorsement is discontinued to complete their program and apply to the Colorado Department of Education for the endorsement.

3.03(4) Applicants will have a maximum of five years from the date of a discontinued content assessment to use the successful content assessment scores for fulfillment of an endorsement criteria.

3.04 Review of License and Endorsement Standards

3.04(1) Pursuant to section 22-2-109(1)(g)-(i), C.R.S., the standards of qualification, preparation and experience required for the issuance of licenses and which prescribe standards for endorsements appropriate for licenses must be reviewed periodically for currency.

3.04(1)(a) The Colorado State Board of Education must establish a schedule for review of licensing/endorsement standards.

3.04(1)(b) The Colorado Department of Education must utilize representatives from all levels of education when reviewing and developing licensing endorsement standards.

4.00 Teaching Endorsements

The following shall serve as standards for endorsements on initial and professional teacher licenses:

4.01 Early Childhood Education (Ages Birth-8)

To be endorsed in early childhood education (ECE), an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program including prescribed field experience and student teaching requirements; have completed an approved program in early childhood education; have demonstrated competency in research-based literacy instruction as outlined in rule 4.02(5) – 4.02(13) and evidence-informed practices in mathematics as outlined in rule 4.02(14) – 4.02(16); and have demonstrated the competencies specified below:

4.01(1) Child growth and development: Understanding a child's growth, development and learning is paramount in providing experiences that foster each child's predictable steps and sequences of development. Knowing how children typically grow, develop and learn allows early childhood educators to plan, guide and monitor learning experiences that address the integration of developmental domains for each and every child. Developmentally appropriate learning experiences consider a child's developmental abilities, temperament, language and cultural background, needs and learning styles while recognizing factors such as family characteristics and community influences. Fully understanding the importance of child growth, development and learning means all children are valued individually and inclusivity is expected and respected.

4.01(1)(a) Knowledge of developmental domains, changes and milestones: ECE professionals are expected to understand, analyze and implement strategies that reflect current child-development pedagogy, theory and research. Primarily, ECE professionals use this knowledge to plan and implement developmentally appropriate environments and experiences to meet the diverse needs of children and families. The diverse needs include but are not limited to culture, language, economic and ability. In order for ECE professionals to provide pedagogically sound experiences for children and families, they need to identify and address children's diverse developmental abilities and collaborate with community partners to assess children's strengths and challenges.

4.01(1)(b) Individual needs and differences: ECE professionals identify children's and families' risk and protective factors and accordingly plan interventions to support children's growth and development. ECE professionals use evidence-based practices to assess and address children's individual needs with respect to culturally responsive curricula and environments.

4.01(1)(c) Special needs: ECE professionals understand and apply inclusive practices for children with diverse developmental abilities. ECE professionals create inclusive environments that respect the individual abilities of children and incorporate individual goals/outcomes into daily routines and practices.

4.01(1)(d) Fostering healthy attachment and relationships: ECE professionals apply knowledge of healthy caregiver/parent/child attachments to support individual child growth, development and learning. ECE professionals understand the importance of positive relationships and their foundation in social-emotional development and learning.

4.01(2) Child observation and assessment: Child observation and assessment enables ECE professionals to use reliable and valid procedures and practices to gather information on an individual child's growth and development. Through gathering information on growth, achievement, learning styles, interests, experiences, challenges and understandings of individual children, the curriculum can be enriched to support children through the developmental stages. Observation and assessment policies, procedures and practices should be sensitive to individual children's needs, culture, language and abilities. Policies, procedures and practices must incorporate ethical standards around confidentiality and unbiased documentation. Allocated time to share results with families and others involved with the child is a critical component to child observation and assessment.

- 4.01(2)(a) Principles: ECE professionals use a continuous authentic assessment process to ask questions, collect information (i.e., data), interpret the information and then make instructional decisions that are individualized and culturally responsive.
- 4.01(2)(b) Gathering and documenting: ECE professionals use a body of evidence from a variety of sources to systematically collect authentic assessment data. ECE professionals collaborate with specialized teams to use the assessment data to recognize and respond to children's developmental concerns through a multi-tiered system of supports.
- 4.01(2)(c) Summarizing and interpreting: ECE professionals link assessment data to the instructional needs of individual children, recognizing many influential factors.
- 4.01(2)(d) Data sharing and reporting: ECE professionals share assessment information to families and other professionals in a culturally sensitive, strength-based manner, using the families' home language.
- 4.01(3) Family and community partnerships: Recognizing that families are their child's first teachers and caregivers is the cornerstone of developing strong partnerships between families and early childhood educators. Children's lives are rooted in their families and communities, so valuing families in the context of their culture, language, home and community is paramount in building strong connections with children and their families. Celebrating and respecting diversity in terms of ability, language, values, customs, traditions, expectations and attitudes is essential for ECE professionals to understand in order to offer developmentally and culturally appropriate learning opportunities that will help children grow, develop and learn. Understanding that children develop in the context of different family structures and dynamics helps ECE professionals to honor the interests, needs, strengths and challenges of developing children as well. When ECE professionals work collaboratively with community organizations and agencies to meet children's needs and to encourage community involvement, children's development is enhanced. Collaborative, reciprocal family and community partnerships help to optimize a child's growth, development and learning.
 - 4.01(3)(a) Valuing families: ECE professionals recognize, value and include families' preferences and perspectives when planning and implementing curricular decisions.
 - 4.01(3)(b) Respect for diversity: ECE professionals implement culturally responsive practices and acknowledge diversity including cultural, language, economic, religious, family structure and ability level.
 - 4.01(3)(c) Effective communication: ECE professionals communicate effectively with families using a variety of effective strategies that respect families' home language and individual communicative needs and preferences.
 - 4.01(3)(d) Building reciprocal relationships with families: ECE professionals support families by building meaningful relationships with them so that families have the ability to engage in their children's development and learning experiences.
 - 4.01(3)(e) Resources that support children and families: ECE professionals support and provide opportunities to families to engage with their children in meaningful ways. Resources are embedded within the community and reflect the diversity of the families.
- 4.01(4) Guidance: Incorporating responsive guidance strategies into an early childhood program provides opportunities for establishing secure, interpersonal peer-to-peer, adult-to-child and adult-to adult relationships. Developmentally appropriate guidance strategies help children to better understand themselves as individuals and as members of a group. A warm and caring, culturally and linguistically responsive environment in which staff consistently use a variety of evidence-based

guidance strategies helps children and families feel respected, valued and accepted. Creating an inclusive and supportive culture is fostered through providing both individual and group guidance strategies.

- 4.01(4)(a) Positive interactions and relationships with individual children: ECE professionals provide responsive, caring environments for children and implement positive guidance strategies based on individualized needs and developmental characteristics.
- 4.01(4)(b) Child guidance and discipline – promoting social and emotional: ECE professionals implement evidence-based social-emotional practices that promote children’s development of self-regulation that contributes to the foundation for future learning and emotional health.
- 4.01(4)(c) Communication: ECE professionals work collaboratively with families and specialists to assess and support children with challenging behaviors. Communication between families and professionals will be responsive and strength-based.
- 4.01(4)(d) Guidance and the role of staff and other adults: ECE Professionals will maintain a supportive environment for staff and families so that they can engage in effective communication, problem-solving and teaming.
- 4.01(5) Health, safety and nutrition: Optimal child development is enhanced if young children are safe from physical and emotional harm. In designing learning environments and experiences for young children, meeting the health, safety and nutritional needs are critical to child growth, development and learning. Environments for young children should be safe from hazards and potential injuries to enable them to explore and learn. Programs should ensure that children are protected from infectious diseases through the implementation of appropriate health, safety and sanitation policies, procedures and daily practices. ECE professionals should work in partnership with families and communities to create healthy, safe and nutritionally sound environments, while honoring family preferences for their children. ECE professionals establish a foundation for future healthy lifestyles and a pathway for lifelong health and well-being.
- 4.01(6) Professional development and leadership: ECE professionals who identify and conduct themselves as professionals play an important role in the growth, development and learning of children. ECE professionals see themselves as members of the larger community of specialized care and education professionals and have a full understanding of the context in which the early childhood profession originated. Those working in the field adopt professional responsibilities, which include adherence to ethical codes of conduct, advocacy and the effective communication of the importance of high-quality early childhood programming. The knowledge achieved in the profession is based on a foundation of research-based practices that is then implemented in all aspects of child, family, colleagues and community involvement. ECE professionals equipped with specialized education, training and coaching/mentoring are better able to provide environments and experiences that support every aspect of a child’s growth, development and learning, including aspects related to a child’s and family’s diverse needs. Participation in advocacy efforts on behalf of children, families and the profession are critical to advancing the knowledge regarding the importance of high-quality early childhood education.
- 4.01(7) Program planning and development is vital to high-quality early childhood programs. Sustaining a philosophical base that utilizes research-driven practices with clear goals and objectives while striving for continuous quality improvement helps to ensure high-quality programming for children and their families. An important responsibility of an early childhood professional is to know and uphold rules, regulations and high-quality standards within the daily operations of the program. Professionals implementing best practices and upholding high-quality standards helps to create high-quality early care and learning environments. Participation in a strong strategic planning process that includes colleagues, community resources, and specialists and takes into account various aspects of organizational, personnel, and financial management is essential.

- 4.01(8) Teaching practices: ECE educators are responsible for planning, implementing and supporting intentional experiences that promote children's growth, development and learning in all developmental and academic domains as defined by the Colorado academic standards. Understanding that children learn from a supportive physical, social and temporal environment, it is important that ECE professionals create opportunities where all children can play interactively, communicate, create, explore and construct knowledge and skills to better understand their world. Establishing a learning environment with regard for student perspectives and that honors all children's individual cultures, strengths, languages, needs and interests and reflects diversity also helps to build a responsive early childhood setting. Planning and implementing a curriculum that responds to the developmental needs of each child and allows children to construct knowledge, skills, concepts, attitudes and dispositions through intentional experiences enhances the learning environment. Teaching practices reflect Colorado Teacher Quality Standards for effective teaching.
- 4.01(8)(a) Planning framework for curricula and learning environment: ECE professionals will plan, implement and evaluate intentional and differentiated instruction that supports the holistic development of all children while adhering to children's strengths, challenges, learning preferences and diversity. Curricula and learning will be embedded within the daily routines and natural environments so that learning is authentic, functional and meaningful to the child and family.
- 4.01(8)(b) Physical health development: ECE professionals plan, implement and adapt activities that promote physical development that is appropriate for children of all ability levels and include indoor and outdoor play experiences that are embedded within the daily routines and developmentally appropriate curriculum.
- 4.01(8)(c) Physical proximity and engagement: ECE professionals plan, implement and adapt activities that promote social engagement that is culturally appropriate for the children and families in their care.
- 4.01(8)(d) Language and research-based literacy development: ECE professionals plan, implement and adapt research-driven curricula through meaningful interactions and daily routines to encourage children of all ability levels to use their home language to understand language, various forms of literacy, interact with others and express themselves through verbal, nonverbal and written forms of communication.
- 4.01(8)(e) Cognitive development: ECE professionals plan, implement and adapt developmentally appropriate curricula throughout daily routines so that children of all ability levels are engaged in learning new concepts, completing tasks and adapting information through meaningful experiences and materials.
- 4.01(8)(f) Social-emotional development: ECE professionals plan, implement and adapt meaningful activities that focus on the promotion of self-regulation, pro-social interactions and emotional expression. Children who are socially and emotionally ready for learning and engagement understand and effectively express their feelings, cooperate with adults and peers and resolve conflicts with support.
- 4.01(8)(g) Fostering creativity: ECE professionals plan, implement and adapt curricula that provide children an opportunity to express themselves through a variety of creative means regardless of their individual abilities, language or culture.
- 4.01(8)(h) Knowledge of productivity: ECE professionals plan and implement a balance of experiences for children that address various levels of play, interactions and activity levels, in addition to responding to the diverse needs of the children in their care.

- 4.01(8)(i) How children learn and approaches to learning: ECE professionals plan, implement and adapt activities that promote all children's creativity, innovation, curiosity, exploration and problem-solving in learning environments and daily routines.

4.02 Elementary Education (Grades K-6)

To be endorsed in elementary education, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program in elementary education including prescribed field experience and student teaching requirements; and have demonstrated the competencies specified below:

- 4.02(1) The elementary educator is knowledgeable about curriculum development and instruction and is able to:
- 4.02(1)(a) design and implement an integrated curriculum based upon adopted content standards including, but not limited to, language arts (e.g., reading, writing, speaking and listening), science, mathematics, social studies, the arts, health, physical education and technology.
 - 4.02(1)(b) select and use equipment, materials and technology which support a wide variety of instructional strategies to be implemented based on adopted content standards and on both informal and formal assessments of student learning needs.
 - 4.02(1)(c) implement appropriate strategies and activities to increase student achievement.
 - 4.02(1)(d) understand and adhere to strict data privacy and security practices.
- 4.02(2) The elementary educator is knowledgeable about child development as it applies to learning and is able to:
- 4.02(2)(a) incorporate documented and proven theories of child development and learning as appropriate for all learners including, but not limited to, exceptional and linguistically diverse learners.
 - 4.02(2)(b) plan and implement differentiated instructional strategies that address stages of individual development, personal traits and interests, language diversity and exceptionality.
 - 4.02(2)(c) recognize and display respect for family, culture, economic and societal influences that affect students' learning and academic progress and draw upon their strengths and experiences in planning for instruction.
 - 4.02(2)(d) effectively articulate the elements of and rationale for the instructional program to students, parents and other professionals.
- 4.02(3) The elementary educator is knowledgeable about classroom environment and is able to:
- 4.02(3)(a) provide a safe and engaging learning environment responsive to individual learner needs and student choices and interests.
 - 4.02(3)(b) effectively utilize developmentally appropriate, learner-responsive time-management techniques.
 - 4.02(3)(c) implement positive and effective classroom management strategies that encourage behaviors that will enhance learning for all students.

4.02(4) The elementary educator is knowledgeable about assessment and is able to:

4.02(4)(a) effectively administer a wide variety of ongoing formal and informal assessments that are developmentally appropriate, responsive to the needs of diverse learners and inclusive of adopted content standards.

4.02(4)(b) effectively utilize assessment results and related data to plan for appropriate student instruction.

4.02(4)(c) actively involve students in understanding the importance of assessment and its relationship to meeting learning objectives.

4.02(4)(d) effectively communicate with students, parents and other professionals concerning assessments and student performance.

4.02(5) The elementary educator is highly knowledgeable about research-based literacy development, is able to develop oral and written learning, as well as:

4.02(5)(a) understand and explain the language processing requirements of proficient reading and writing including phonological (speech sound) processing; orthographic (print) processing; semantic (meaning) processing; syntactic (sentence level) processing; discourse (connected text level) processing.

4.02(5)(b) understand and explain other aspects of cognition and behavior that affect reading and writing including attention, executive function, memory, processing speed and graphomotor control.

4.02(5)(c) define and identify environmental, cultural and social factors that contribute to literacy development (e.g., language spoken at home, language and literacy experiences, cultural values).

4.02(5)(d) know and identify phases in the typical developmental progression of oral language (semantic, syntactic, pragmatic); phonological skill; printed word recognition; spelling; reading fluency; reading comprehension; and written expression.

4.02(5)(e) understand and explain the known causal relationship among phonological skill, phonic decoding, spelling, accurate and automatic word recognition, text reading fluency, background knowledge, verbal reasoning skill, vocabulary, reading comprehension and writing.

4.02(5)(f) know and explain how the relationships among the major components of research-based literacy development change with reading development (i.e., changes in oral language, including phonological awareness; phonics and word recognition; spelling; reading and writing fluency; vocabulary; reading comprehension skills and strategies; written expression).

4.02(5)(g) know reasonable goals and expectations for learners at various stages of reading and writing development.

4.02(6) The elementary educator is knowledgeable about the structure of language including:

4.02(6)(a) phonology (the speech sound system), and is able to:

4.02(6)(a)(i) identify, pronounce, classify and compare the consonant and vowel phonemes of English.

4.02(6)(b) orthography (the spelling system), and is able to:

4.02(6)(b)(i) understand the broad outline of historical influences on English spelling patterns, especially Anglo-Saxon, Latin (romance) and Greek;

4.02(6)(b)(ii) define grapheme as a functional correspondence unit or representation of a phoneme;

4.02(6)(b)(iii) recognize and explain common orthographic rules and patterns in English;

4.02(6)(b)(iv) know the difference between “high frequency” and “irregular” words; and

4.02(6)(b)(v) identify, explain and categorize six basic syllable types in English spelling.

4.02(6)(c) morphology, and is able to:

4.02(6)(c)(i) identify and categorize common morphemes in English, including Anglo-Saxon compounds, inflectional suffixes, and derivational suffixes; Latin-based prefixes, roots, and derivational suffixes; and Greek-based combining forms.

4.02(6)(d) semantics, and is able to:

4.02(6)(d)(i) understand and identify examples of meaningful word relationships or semantic organization.

4.02(6)(e) syntax, and is able to:

4.02(6)(e)(i) define and distinguish among phrases, dependent clauses, and independent clauses in sentence structure; and

4.02(6)(e)(ii) identify the parts of speech and the grammatical role of a word in a sentence.

4.02(6)(f) discourse organization, and is able to:

4.02(6)(f)(i) explain the major differences between narrative and expository discourse;

4.02(6)(f)(ii) identify and construct expository paragraphs of varying logical structures (e.g., classification, reason, sequence); and

4.02(6)(f)(iii) identify cohesive devices in text and inferential gaps in the surface language of text.

4.02(7) The elementary educator is knowledgeable about the administration and interpretation of assessments for planning instruction, including:

4.02(7)(a) understanding the differences among screening, diagnostic, outcome and progress monitoring assessments.

4.02(7)(b) understanding basic principles of test construction including reliability, validity, norm-referencing and criterion-referencing.

4.02(7)(c) understanding the principles of progress monitoring and the use of graphs to indicate progress.

- 4.02(7)(d) knowing the range of skills typically assessed in terms of phonological skills, decoding skills, oral reading skills, spelling and writing.
- 4.02(7)(e) recognizing the content and purposes of the most common diagnostic tests used by psychologists and educational evaluators.
- 4.02(7)(f) interpreting measures of reading comprehension and written expression to make appropriate instructional recommendations.
- 4.02(8) The elementary educator is able to develop phonology, and is able to:
 - 4.02(8)(a) identify the general goal of phonological skill instruction and be able to explicitly state the goal of any phonological teaching activity.
 - 4.02(8)(b) know the progression of phonological skill development (i.e., rhyme, syllable, onset-rime, phoneme differentiation).
 - 4.02(8)(c) identify the differences among various phonological manipulations, including identifying, matching, blending, segmenting, substituting and deleting sounds.
 - 4.02(8)(d) understand the principles of phonological skill instruction: brief, multisensory, conceptual and auditory-verbal.
 - 4.02(8)(e) understand the reciprocal relationship among phonological processing, reading, spelling and vocabulary.
 - 4.02(8)(f) understand the phonological features of a second language, such as Spanish, and how they interfere with English pronunciation and phonics.
- 4.02(9) The elementary educator is able to develop phonics and word-recognition knowledge related to reading including:
 - 4.02(9)(a) knowing or recognizing the appropriate sequence of phonics concepts from basic to advanced.
 - 4.02(9)(b) understanding principles of explicit and direct teaching; model, lead, give guided practice and review.
 - 4.02(9)(c) stating the rationale for multisensory and multimodal techniques.
 - 4.02(9)(d) knowing the routines of a complete lesson format, from the introduction of a word-recognition concept to fluent application in meaningful reading and writing.
 - 4.02(9)(e) understanding research-based adaptations of instruction for students with weaknesses in working memory, attention, executive function or processing speed.
- 4.02(10) The elementary educator is able to develop fluent, automatic reading of text:
 - 4.02(10)(a) understanding the role of fluency in word recognition, oral reading, silent reading, comprehension of written discourse and motivation to read.
 - 4.02(10)(b) understanding reading fluency as a stage of normal reading development, as the primary symptom of some reading disorders and as a consequence of practice and instruction.

- 4.02(10)(c) defining and identifying examples of text at a student's frustration, instructional and independent reading level.
- 4.02(10)(d) knowing sources of activities for building fluency in component reading skills.
- 4.02(10)(e) knowing which instructional activities and approaches are most likely to improve fluency outcomes.
- 4.02(10)(f) understanding techniques to enhance a student's motivation to read.
- 4.02(10)(g) understanding appropriate uses of assistive technology for students with serious limitations in reading fluency.
- 4.02(10)(h) understand the relationship between accuracy and reading fluency.
- 4.02(11) The elementary educator is knowledgeable about vocabulary development related to reading instruction including:
 - 4.02(11)(a) understanding the role of vocabulary development and vocabulary knowledge in comprehension.
 - 4.02(11)(b) understanding the role and characteristics of direct and indirect (contextual) methods of vocabulary instruction.
 - 4.02(11)(c) knowing varied techniques for vocabulary instruction before, during and after reading.
 - 4.02(11)(d) understanding that word knowledge is multifaceted.
 - 4.02(11)(e) understanding the sources of wide differences in students' vocabularies.
- 4.02(12) The elementary educator is able to develop text comprehension including:
 - 4.02(12)(a) being familiar with teaching strategies that are appropriate before, during and after reading and that promote reflective reading.
 - 4.02(12)(b) contrasting the characteristics of major text genres, including narration, exposition and argumentation.
 - 4.02(12)(c) understanding the similarities and differences between written composition and text comprehension, and the usefulness of writing in building comprehension.
 - 4.02(12)(d) identifying in any text the phrases, clauses, sentences, paragraphs and "academic language" that could be a source of miscomprehension.
 - 4.02(12)(e) understanding levels of comprehension including the surface code, text base and mental model (situation model).
 - 4.02(12)(f) understanding factors that contribute to deep comprehension, including background knowledge, vocabulary, verbal reasoning ability, knowledge of literary structures and conventions, and use of skills and strategies for close reading of text.
- 4.02(13) The elementary educator is able to develop handwriting, spelling and written expression:
 - 4.02(13)(a) handwriting:

4.02(13)(a)(i) knowing research-based principles for teaching letter naming and letter formation, both manuscript and cursive; and

4.02(13)(a)(ii) knowing techniques for teaching handwriting fluency.

4.02(13)(b) spelling:

4.02(13)(b)(i) recognizing and explaining the relationship between transcription skills and written expression;

4.02(13)(b)(ii) identifying students' level of spelling development and orthographic knowledge; and

4.02(13)(b)(iii) recognizing and explaining the influences of phonological, orthographic, and morphemic knowledge on spelling.

4.02(13)(c) written expression:

4.02(13)(c)(i) understanding the major components and processes of written expression and how they interact (e.g., basic writing/transcription skills versus text generation);

4.02(13)(c)(ii) knowing grade and developmental expectation for students' writing in the following areas: mechanics and conventions of writing, composition, revision and editing processes; and

4.02(13)(c)(iii) understanding appropriate uses of assistive technology in written expression.

4.02(14)The elementary educator is knowledgeable about mathematics concepts and able to articulate these concepts as well as concepts that precede and that follow the content they teach, regarding:

4.02(14)(a) counting and cardinality, including:

4.02(14)(a)(i) perceptual and conceptual subitizing, counting and matching, and how these skills are related and developed.

4.02(14)(b) numbers and operations in base ten, including:

4.02(14)(b)(i) the comparison of quantities and less-than and greater-than relationships as an early step toward decomposing and composing numbers in ways that are necessary in common arithmetic procedures;

4.02(14)(b)(ii) the importance of the benchmarks of 5 and 10 as support for seeing numbers as combinations of other numbers;

4.02(14)(b)(iii) that computation includes mental computation, estimation strategies, invented and standard algorithms;

4.02(14)(b)(iv) how efficient base-ten computation methods rely on decomposing numbers and applying properties of operations to decompose the calculation into parts;

4.02(14)(b)(v) how to interpret multiple meanings of fractions, including part-whole relationships, measures, locations on a number line, quotients, ratios and operators; and

4.02(14)(b)(vi) the unit as a foundational concept, especially as it is fundamental to the interpretation of rational numbers.

4.02(14)(c) operations and algebraic thinking, including:

4.02(14)(c)(i) the varied arithmetic problem types such as joining, separating and comparing problems with different parts of a problem situation unknown;

4.02(14)(c)(ii) that the equal sign denotes that two expressions have the same value, avoiding the common misconception of the equal sign as an indication that the answer comes next;

4.02(14)(c)(iii) the rationale behind equivalent fractions and operations with fractions, and how the concept of equivalence supports early algebraic thinking; and

4.02(14)(c)(iv) how to translate and contextualize symbolic representations of phenomena as well as notice mathematical relations and patterns within real-life and problem contexts.

4.02(14)(d) geometry and measurement, including:

4.02(14)(d)(i) how the relationships between parts of two-dimensional shapes define and describe circles, triangles, rectangles, squares, rhombuses, trapezoids, hexagons and other polygons;

4.02(14)(d)(ii) how the relationships between three-dimensional shapes define and describe cubes, prisms, cylinders, pyramids, cones and spheres;

4.02(14)(d)(iii) how the composition and decomposition of shapes underlies the understanding of fractions, coordinate geometry, area measurement and volume; and

4.02(14)(d)(iv) how determining an object's size relates to both the object's measurable geometric attributes and the choice of unit needed to quantify that attribute.

4.02(14)(e) data analysis, including:

4.02(14)(e)(i) that the foundations of statistical reasoning begin with collecting and organizing data to answer a question about our world and then examining the variability of that situation;

4.02(14)(e)(ii) that number and measurement are central to categorizing and understanding data, and data analysis provides a context in which number and measurement are used; and

4.02(14)(e)(iii) how to use data displays to ask and answer questions about data, including the mean, median, interquartile range, and mean absolute deviation, and use these measures to compare data sets.

4.02(15) The elementary educator is knowledgeable of the eight common standards for mathematical practice, including:

4.02(15)(a) engaging in appropriate mathematical processes and practices and supporting students in doing the same; and

4.02(15)(b) exhibiting productive mathematical dispositions toward the teaching and learning of

mathematics to support students' sense making, understanding and reasoning.

4.02(16) The elementary educator is knowledgeable about mathematics-specific pedagogy and practices, including:

4.02(16)(a) analyzing the mathematical content of curriculum, including the learning trajectories for key mathematical topics and how they connect to foundational frameworks related to standards, curriculum, and assessment;

4.02(16)(b) using research evidenced core set of pedagogical practices that are effective for developing students' meaningful learning of mathematics;

4.02(16)(c) using mathematical tools and technology, such as physical models and mathematical representations, that are designed to support mathematical reasoning and sensemaking;

4.02(16)(d) understanding students as learners of mathematics, including students' mathematical knowledge, skills and dispositions; and

4.02(16)(e) identifying and utilizing acceleration and intervention strategies to help students who are below grade level or struggling in mathematics, children with disabilities, and students who are English language learners.

4.02(17) The elementary educator shall self-assess the effectiveness of instruction based on the achievement of students and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.

4.03 Agriculture, Food and Natural Resources (Grades 7-12)

To be endorsed in agriculture, food and renewable natural resources, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program including prescribed field experience and student teaching requirements; have completed an approved program in agriculture, food and renewable natural resources; and have demonstrated the competencies listed below:

4.03(1) The agriculture, food and renewable natural resources educator must have extensive preparation in agriculture, food and renewable natural resources and demonstrate knowledge in related content including, but not limited to, animal sciences; power, structural and technical systems; plant sciences; agribusiness systems; environmental science and natural resource systems; and food products and processing.

4.03(1)(a) The agriculture, food and renewable natural resources educator must be knowledgeable and able to effectively instruct students about one or more of the following content areas:

4.03(1)(a)(i) animal sciences to include, but not be limited to: trends in the animal industry, best practices for animal welfare, nutrition, reproduction, environmental management and performance;

4.03(1)(a)(ii) agricultural power, structural and technical systems to include, but not be limited to: physical science applications in agriculture PST systems; equipment operation, repair and maintenance; planning, building and maintaining agriculture structures; agricultural metal fabrication; and operation and utilization of geospatial technologies in agriculture;

- 4.03(1)(a)(iii) plant systems to include, but not be limited to: crop management planning; plant anatomy, classification and philosophy; propagation, culture and harvest of plant products; and principles of design in plant systems for environmental enhancement;
- 4.03(1)(a)(iv) agricultural business systems to include, but not be limited to: business management principles; financial and production data collection and recording; credit and cash management; business planning; and sales and marketing;
- 4.03(1)(a)(v) environmental science and natural resources to include, but not be limited to: natural resources use planning; interrelationships between natural resources and humans; sustainable production and use of natural resources; environmental analytical procedures; tools and equipment; environmental policies and regulations; and environmental service systems; and
- 4.03(1)(a)(vi) food products and processing to include, but not be limited to: food safety, sanitation and practices; food nutrition; biology, microbiology and chemistry; food processes, storage, distribution and consumption; and food industry scope and development.
- 4.03(1)(b) The agriculture, food and renewable natural resources educator is knowledgeable about and able to:
 - 4.03(1)(b)(i) ensure that students' work reflects industry standards and that students remain aware of current issues in the field;
 - 4.03(1)(b)(ii) maintain an active advisory committee(s) composed of local business/industry representatives to assure that implementation of the curriculum accurately reflects current industry conditions and standards, and to serve as a resource for the placement of students;
 - 4.03(1)(b)(iii) acquire and allocate supplementary fiscal and human resources, as needed, from and within the school, community and industry;
 - 4.03(1)(b)(iv) provide experiences in simulated or real workplace environments that can provide students with appropriate and applicable firsthand experience to enable them to make career decisions based on a knowledgeable perspective;
 - 4.03(1)(b)(v) provide students with a wide variety of opportunities to gain experience with and be able to exercise initiative in applying the skills and abilities of organizational management and leadership, public speaking and parliamentary procedure, and to earn awards and recognition through participation in student vocational and community service organizations;
 - 4.03(1)(b)(vi) provide students with the ability to evaluate, select, adapt and apply technology as needed;
 - 4.03(1)(b)(vii) incorporate and reinforce practical applications of core content knowledge, skills and abilities in simulated or real-world situations and by coordinating instruction with other educational staff;
 - 4.03(1)(b)(viii) present and discuss controversial issues related to agriculture and renewable resources in the instructional setting with clarity and without bias; and

4.03(1)(b)(ix) maintain a safe, well-equipped and well-maintained learning environment and instruct students in the safe and appropriate use, care and maintenance of tools, equipment and applicable substances and materials.

4.03(2) The agriculture, food and renewable resources educator shall self-assess the effectiveness of instruction based on the achievement of students and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.

4.04 Visual Arts (Grades K-12)

To be endorsed in visual arts, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program including prescribed field experience and student teaching requirements; have completed an approved program in the content of art; and have demonstrated the competencies listed below:

4.04(1) The visual arts educator is knowledgeable about and able to instruct students in:

4.04(1)(a) determining and interpreting meaning in works of art.

4.04(1)(b) creating personal meaning in art.

4.04(1)(c) identifying the variety of viewpoints and philosophies behind works of art.

4.04(2) The visual arts educator is able to effectively inform students about the terminology and facets of art inherent in their own and other works of art including, but not limited to:

4.04(2)(a) the vocabulary and critical language of arts discourse around relevant art processes.

4.04(2)(b) the expressive features and characteristics of art.

4.04(2)(c) the ability to create multiple solutions to visual arts problems.

4.04(3) The visual arts educator is able to effectively instruct students regarding:

4.04(3)(a) the preparation, research, safety, interrelationships, processes and materials applicable to areas of specialization in art including, but not limited to:

4.04(3)(a)(i) drawing, painting, sculpture, photography, printmaking, fibers, ceramics, jewelry, crafts and media arts; and

4.04(3)(a)(ii) appropriate hands-on art experiences taught in a curriculum designed around the state standards and focused on developing cognitive and manipulative skills.

4.04(4) The visual arts educator is able to teach students about the history of art including that in contemporary and past cultures, with an emphasis on:

4.04(4)(a) the contributions of the arts to the development of civilization and culture.

4.04(4)(b) the relationship of the arts to the culture/society in which they originated.

4.04(4)(c) the influence of the arts on subsequent and current culture(s).

- 4.04(4)(d) how the arts are an academic discipline that can relate, connect and transfer to a multitude of life experiences, subjects and disciplines such as math; science; reading, writing and communicating; and social studies.
- 4.04(5) The visual arts educator is able to instruct students on the objective and subjective evaluation and critique of art, and how to:
 - 4.04(5)(a) formulate and articulate judgments about works of art based on objective and subjective rationale.
 - 4.04(5)(b) engage in knowledgeable discourse about aesthetics, including the purpose and value of art to the individual and society, from a variety of philosophical stances.
- 4.04(6) The visual arts educator shall provide students with motivation and encouragement to pursue appropriate forms of self-expression in the visual and other arts.
- 4.04(7) The visual arts educator shall promote more advanced instruction where appropriate.
- 4.04(8) The visual arts educator shall self-assess the effectiveness of instruction based on the achievement of students and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.

4.05 Business and Marketing (Grades 7-12)

To be endorsed in business and marketing an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program including prescribed field experience and student teaching requirements; have completed an approved preparation program in business/marketing; and have demonstrated the competencies listed below:

- 4.05(1) The business/marketing educator must have extensive preparation in business and marketing and be knowledgeable about and able to effectively instruct students in the following content areas:
 - 4.05(1)(a) economics, labor market conditions and micro- and macro-economic factors of a domestic and global economy.
 - 4.05(1)(b) technology and its appropriate applications.
 - 4.05(1)(c) information management.
 - 4.05(1)(d) accounting and finance including the basic functions of auditing, banking, investments, taxation, insurance and risk taking.
 - 4.05(1)(e) personnel policies and human resource management including hiring, staff development, compensation and employee relations.
 - 4.05(1)(f) business communications including the use of technology, written communication and presentation skills.
 - 4.05(1)(g) business law, sales contracts, consumer law, employment (including personnel policies and practices), business organization and related matters.
 - 4.05(1)(h) legislation as it affects business and/or marketing fields and issues.

- 4.05(1)(i) business and marketing ethics.
- 4.05(1)(j) new and traditional business and/or marketing options, as related to career skills and abilities and career development.
- 4.05(1)(k) marketing principles and practices of buyer analysis including, but not limited to, development and distribution of products and services.
- 4.05(2) The business/marketing educator shall self-assess the effectiveness of instruction based on the achievement of students and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.

4.06 (Rule Number Reserved.)

4.07 Drama Theatre Arts (Grades K-12)

To be endorsed in drama theatre arts, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program including prescribed field experience and student teaching requirements; have completed an approved program in drama theatre arts; be knowledgeable about the Colorado Academic Standards in drama and theatre arts and have demonstrated the competencies specified below:

- 4.07(1) The drama theatre arts educator is knowledgeable about the content and creative processes of drama theatre arts and is able to instruct students about:
 - 4.07(1)(a) historical and cultural context including, but not limited to, global theatrical styles, techniques and traditions over time and acknowledging drama theatre arts in society as creative, expressive, communicable and social.
 - 4.07(1)(b) a variety of approaches to critically analyze, observe and critique a variety of styles, genres, aesthetics and technical design, and uses of drama and theatre arts.
 - 4.07(1)(c) skillful use of drama theatre arts literacy in students, demonstrating ways to read, write and communicate using the language of drama theatre arts.
 - 4.07(1)(d) informed demonstration and identification of a variety of techniques and styles of drama theatre arts with confidence, expression, accuracy and intent.
 - 4.07(1)(e) approaches to design, write, problem-solve and innovate to find their own unique dramatic voice.
- 4.07(2) The drama theatre arts educator is able to instruct, effectively demonstrate and provide experiences for students in various areas of drama theatre arts pedagogical theory and practice including, but not limited to:
 - 4.07(2)(a) determining and interpreting meaning in dramatic works.
 - 4.07(2)(b) methods of teaching drama theatre arts to students, as age and grade appropriate, and to other educators, as related but not limited to direction and selection of dramatic or theatrical subject matter; communication of ideas through drama and/or theatre; distinguishing theatrical forms and styles; creation of a variety of dramatic and/or theatrical works, employing skills related to dramatic and/or theatrical performances; evaluation of dramatic and/or theatrical works; and relating drama theatre arts to diverse cultures.

- 4.07(2)(c) knowledge and method of how drama theatre arts relates, informs, connects and transfers to other subjects and disciplines.
- 4.07(2)(d) knowledge and the ability to envision and implement the creative cyclical process, including critically responding to dramatic and/or theatrical works, the ability to create dramatic and/or theatrical works; and the ability to perform in a variety of dramatic and/or theatrical works.
- 4.07(3) The drama theatre arts educator shall facilitate students' learning in order to develop critical-thinking and reasoning skills, information literacy, collaboration, self-direction and invention skills for lifelong learning about drama theatre arts, including the personal pursuit of further experience in drama theatre arts.
- 4.07(4) The drama theatre arts educator shall self-assess and act upon feedback regarding the effectiveness of instruction, based on the achievement of students, and pursue continuous professional development through appropriate activities and coursework and through participation in relevant professional organizations.

4.08 Computer Science (Grades K-12)

To be endorsed in computer science, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program, including prescribed field experience and student teaching requirements; have completed an approved program in computer science with a concentration in one or more of the content areas outlined in section 4.08(3) of these rules; and have demonstrated the competencies below:

- 4.08(1) The computer science teacher is knowledgeable about and able to demonstrate:
 - 4.08(1)(a) computational thinking and concepts of programming, including:
 - 4.08(1)(a)(i) problem-solving skills, variables and control structures, abstraction and algorithms;
 - 4.08(1)(a)(ii) code comments, pseudocode, flowcharts and other documentation; and
 - 4.08(1)(a)(iii) testing and debugging;
 - 4.08(1)(b) hardware and software systems, including:
 - 4.08(1)(b)(i) inputs and outputs;
 - 4.08(1)(b)(ii) storage and the process of the transformation of data;
 - 4.08(1)(b)(iii) specific functions and use of hardware; and
 - 4.08(1)(b)(iv) troubleshooting problems;
 - 4.08(1)(c) internet and network systems, including:
 - 4.08(1)(c)(i) the internet's role as facilitator of the transfer of information;
 - 4.08(1)(c)(ii) a network as a series of interconnected devices and the internet as a series of interconnected networks; and
 - 4.08(1)(c)(iii) basic internet safety;

4.08(1)(d) how to collect, store, transform, analyze, evaluate and secure data; and

4.08(1)(e) the impacts of computing, including:

4.08(1)(e)(i) the interaction between human and computing systems;

4.08(1)(e)(ii) the history of computer science;

4.08(1)(e)(iii) equity and access considerations;

4.08(1)(e)(iv) laws and ethics associated with the field of computer science and the ramifications of the misuse of technology; and

4.08(1)(e)(v) tradeoffs between usability and security in hardware, networks and the internet.

4.08(2) The computer science educator is able to:

4.08(2)(a) create and foster an engaging environment in which all students develop the requisite computer science skills to participate more fully in a technologically based collaborative society;

4.08(2)(b) analyze and evaluate computer science curricula to ensure age- and grade-appropriate content;

4.08(2)(c) effectively integrate technology into instructional and assessment strategies, as appropriate to computer science education and the learner;

4.08(2)(d) perform laboratory-based, hands-on activities, including unplugged activities, block-based programming and third-generation programming language, that demonstrate grade-appropriate programming concepts and proficiency; and

4.08(2)(e) implement instructional practices and grade-appropriate applications on the interrelationships between the field of computer science and disparate content areas to:

4.08(2)(e)(i) make concrete and abstract representations; and

4.08(2)(e)(ii) connect computer science with real-world situations.

4.08(3) The computer science educator is knowledgeable and able to effectively instruct students about:

4.08(3)(a) artificial intelligence;

4.08(3)(b) computational sciences;

4.08(3)(c) computer programming;

4.08(3)(d) cybersecurity;

4.08(3)(e) data science;

4.08(3)(f) hardware and network systems;

4.08(3)(g) machine learning; and

4.08(3)(h) robotics.

4.08(4) The computer science educator is knowledgeable about the specific shifts in general instruction practices required for computer science education and is able to help students:

4.08(4)(a) develop resilience and perseverance with regard to computer science and computational learning experiences;

4.08(4)(b) attain a level of comfort with ambiguity and open-ended problems;

4.08(4)(c) see failure as an opportunity to learn and innovate;

4.08(4)(d) understand that computational thinking is a fundamental human ability and does not require a computer, and how that understanding can leverage the power of computers to solve a problem;

4.08(4)(e) recognize that not all problems can be solved computationally; and

4.08(4)(f) understand the role and importance of cybersecurity.

4.08(5) The computer science educator shall self-assess and act upon feedback regarding the effectiveness of instruction based on the achievement of students and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations to keep abreast of the ever-changing developments in technology.

4.09 English Language Arts (Grades 7-12)

To be endorsed in English language arts, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program including prescribed field experience and student teaching requirements; have completed an approved program in English language arts; be knowledgeable about the Colorado Academic Standards in reading, writing and communicating; and have demonstrated the competencies specified below:

4.09(1) The English language arts educator is knowledgeable about the content of the English language arts and is able to develop English language arts skills in students based on an applicable understanding of the history and structure of the English language including, but not limited to, the impact of literary and psycholinguistic, sociolinguistic, cultural, familial and other relevant factors, and is able to:

4.09(1)(a) articulate to students an understanding of the relationships between the English language arts and their applications including, but not limited to, reading, writing, speaking, listening and viewing.

4.09(1)(b) select, adapt and create resources, instructional materials and coursework which provide students at all academic levels with:

4.09(1)(b)(i) multiple and varied ways of reinforcing and adding to English language skills development;

4.09(1)(b)(ii) opportunities to gain an understanding and appreciation of the history, structure and evolving nature of the English language;

4.09(1)(b)(iii) the ability to use appropriate variations in language depending on purpose and audience; and

- 4.09(1)(b)(iv) the ability to use standard English language (e.g., usage, grammar, spelling and syntax) when communicating with and understanding others in a variety of formal and informal situations.
- 4.09(2) The English language arts educator is knowledgeable about literature written for adolescents and adults and is able to strategically and with intention present to students an age-appropriate selection of a wide and balanced variety of literary works, authors and genres including, but not limited to:
 - 4.09(2)(a) traditional and contemporary literature, including young adult literature, representing a range of cultures and viewpoints from the United States and other countries.
 - 4.09(2)(b) works of literary theory and literary criticism.
- 4.09(3) The English language arts educator is knowledgeable about appropriate, varied and high-quality literature which can demonstrate to students that literature is central to the humanities and provides a shared reference point from which questions of values, attitudes and beliefs can be explored, and is able to present opportunities for students to:
 - 4.09(3)(a) learn to enjoy and appreciate literature.
 - 4.09(3)(b) gain a critical understanding of a wide variety of literary types, styles and themes – both fiction and non-fiction.
 - 4.09(3)(c) explore, analyze, interpret and evaluate literature.
 - 4.09(3)(d) demonstrate their comprehension of texts in a variety of forms of literature and writings.
 - 4.09(3)(e) use a range of written and oral, formal and informal means of responding to literature.
 - 4.09(3)(f) gain an appreciation of literature that reflects the breadth and diversity of the human experience which serves as a mirror of their own experiences as well as a window into the experiences and perspectives of others.
- 4.09(4) The English language arts educator is knowledgeable about developing students' abilities to read strategically and is able to instruct them about skills related, but not limited to:
 - 4.09(4)(a) analyzing, identifying and clarifying the meaning of texts.
 - 4.09(4)(b) comprehending, interpreting and evaluating texts.
 - 4.09(4)(c) choosing reading materials with increasing sophistication and complexity.
 - 4.09(4)(d) understanding the synergistic relationship between reading and writing.
- 4.09(5) The English language arts educator is knowledgeable about a wide range of readings, from fiction and non-fiction print literature to non-print texts; classical literary genres to those in popular culture; and traditional to contemporary works, and is able to teach students the skills and abilities to:
 - 4.09(5)(a) make sound choices for individual reading.
 - 4.09(5)(b) read independently for pleasure, learning and research.

- 4.09(5)(c) develop individual strategies for reading and comprehending texts.
- 4.09(5)(e) ask strategic questions, predict, infer, paraphrase and summarize what is read.
- 4.09(5)(f) use a range of strategies to read with a critical eye to discern the craft of the written piece, rhetorical strategies, authorial intent and literary technique.
- 4.09(5)(g) compare the development of themes, concepts and authors' writing styles by analyzing a variety of literary works.
- 4.09(6) The English language arts educator is knowledgeable about written communication and able to develop skills and abilities including, but not limited to:
 - 4.09(6)(a) effective composition for different purposes and audiences, in a variety of ways and through a variety of genres.
 - 4.09(6)(b) effective writing processes (e.g., planning, drafting, revising, proofreading, editing and publishing).
 - 4.09(6)(c) effective use of the rules of written language.
 - 4.09(6)(d) appropriate and effective thinking skills (e.g., problem-solving, analysis, synthesis, evaluation, etc.) to craft written work.
- 4.09(7) The English language arts educator is knowledgeable about oral communication and is able to develop appropriate student usage thereof including, but not limited to:
 - 4.09(7)(a) employing communication strategies for different purposes and audiences in a variety of formats.
 - 4.09(7)(b) utilizing appropriate oral communication processes (e.g., research, organization, presentation and incorporation of feedback).
 - 4.09(7)(c) applying elements of effective communication (e.g., clarity of thought and speech, appropriateness of language, effective use of voice and articulation, and listening skills).
 - 4.09(7)(d) employing listening and speaking as complementary processes.
- 4.09(8) The English language arts educator is knowledgeable about instructional strategies and is able to instruct so that students develop an appropriate vocabulary consisting of academic language as well as real-world language, and so that students are able to use written and oral language for a variety of communication purposes, by providing them with opportunities to:
 - 4.09(8)(a) practice and gain proficiency in the art of written and oral communication for a variety of purposes and audiences.
 - 4.09(8)(b) reinforce writing and speaking skills to underscore their importance in learning and communicating.
 - 4.09(8)(c) experience thoughtful guided discourse that allows the practice of a variety of communication strategies.
 - 4.09(8)(d) be evaluated on oral presentations and written work based upon a prearranged, clearly defined set of criteria that provides fair, consistent and constructive feedback for improvement.

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- 4.09(9) The English language arts educator is knowledgeable about visual communication and information processes and is able to instruct students about:
- 4.09(9)(a) active and constructive viewing and the visual representation of ideas to assure clear understanding of what is intended.
 - 4.09(9)(b) critically evaluating information, media and technology.
 - 4.09(9)(c) utilizing technological resources for the access, selection and application of relevant information.
 - 4.09(9)(d) identifying the influence of mode and style on representation of content.
 - 4.09(9)(e) identifying relevant research for various purposes and materials.
- 4.09(10) The English language arts educator is knowledgeable about technology and media and is able to incorporate them into classroom use and instruction so that students become familiar with visual communication and information processes and are able to:
- 4.09(10)(a) acquire knowledge through the use of a variety of strategies, resources, processes and technologies.
 - 4.09(10)(b) judge the quality, usefulness and appropriateness of media and technology presentations.
 - 4.09(10)(c) use multi-media technology to communicate their own ideas in a variety of ways.
 - 4.09(10)(d) identify visual and electronic texts as significant components of the English language arts and be able to select, analyze and evaluate them based on need or usefulness.
- 4.09(11) The English language arts educator is knowledgeable about student assessments and is able to:
- 4.09(11)(a) develop a variety of ways students may demonstrate mastery appropriate to the English language arts classroom.
 - 4.09(11)(b) articulate the relationship between standards, assessments, curricula and classroom instructional strategies.
 - 4.09(11)(c) analyze and incorporate assessment data:
 - 4.09(11)(c)(i) into the planning for individual and group instruction; and
 - 4.09(11)(c)(ii) into the diagnosis of individual student and group needs to increase and/or enhance achievement including, but not limited to, remediation or acceleration.
 - 4.09(11)(d) incorporate a range of clearly identified, useful, appropriate, fair and equitable assessment methods to provide students:
 - 4.09(11)(d)(i) feedback, guidance and instruction to increase their proficiency in reading, writing, speaking and listening;
 - 4.09(11)(d)(ii) multiple opportunities to create products which demonstrate competence in communication through a variety of means including, but not limited to, audio/visual, written and oral presentation; and
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4.09(11)(d)(iii) instruction based on assessments of students' needs and on approved standards for English language arts.

4.09(12) The English language arts educator is knowledgeable about literacy and is able to:

4.09(12)(a) provide students with extensive opportunities to acquire and use language and to evaluate literature and texts through reading, writing, speaking, listening and viewing.

4.09(12)(b) demonstrate and promote a commitment to the development of literacy and its applications.

4.09(12)(c) assist students whose first language is one other than English in developing fluency and competence in English language arts.

4.09(12)(d) develop materials and activities that promote student understanding of the synergistic interrelationship between all of the English language arts as defined in 4.09(1)(a).

4.09(12)(e) assist students in identifying and defining questions related to literature and other texts.

4.09(12)(f) effectively model to students the mastery of English oral and written language.

4.09(12)(g) select, adapt and create resources based on an assessment of student academic needs and relevant to required curricula, age grade-level expectations and levels of English-language proficiency.

4.09(12)(h) refine instruction and instructional materials based on student progress.

4.09(12)(i) create an inclusive, challenging, engaging classroom environment in which individual ideas are encouraged, acknowledged, respected and valued.

4.09(12)(j) incorporate student content standards into ongoing lesson plans.

4.09(12)(k) use assessment results to evaluate and improve teaching effectiveness and to plan for professional growth.

4.09(13) The English language arts educator is able to effectively communicate to students, parents, staff and other interested audiences about curriculum, assessment, class requirements, methods of instructional delivery and high standards and expectations for all students.

4.09(14) The English language arts educator shall self-assess the effectiveness of instruction based on the achievement of students and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.

4.10 World Languages (Grades K-12)

To be endorsed in a world language, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program including prescribed field experience and student teaching requirements; have completed an approved program for the preparation of world language teachers; be knowledgeable about the Colorado Academic Standards for world languages; and have demonstrated the competencies specified below:

4.10(1) Language proficiency: A competent world languages teacher is proficient in the language(s) taught, according to the proficiency guidelines outlined by the American Council of the Teaching of Foreign Languages; is able to communicate effectively in interpersonal, interpretive and

- presentational contexts at a minimum proficiency level, equivalent to the advanced low level defined by the council's proficiency guidelines; and is able to:
- 4.10(1)(a) speak in the interpersonal mode of communication (except classical languages such as Latin, as there is no requirement for them to be spoken in interpersonal mode).
 - 4.10(1)(b) interpret oral, printed and video texts and visual images by demonstrating both literal and figurative or symbolic comprehension.
 - 4.10(1)(c) present oral and written information to audiences of listeners or readers.
- 4.10(2) Cultures, linguistics, literatures and concepts from other disciplines: A competent world languages teacher demonstrates understanding of the multiple content areas that comprise the field of world language learning, recognizes the changing nature of language and is able to:
- 4.10(2)(a) demonstrate understanding of the interrelatedness of perspectives, products and practices in the target cultures.
 - 4.10(2)(b) demonstrate target cultural understandings and compare cultures through perspectives, products and practices of those cultures.
 - 4.10(2)(c) identify the linguistic elements of the target language system needed to communicate in a variety of settings.
 - 4.10(2)(d) demonstrate an understanding of linguistics and the changing nature of language, and compare language systems.
 - 4.10(2)(e) identify distinctive viewpoints in the literary texts, films, art works and documents from a range of disciplines available only through the target language.
 - 4.10(2)(f) demonstrate an understanding of texts on literary and cultural themes as well as interdisciplinary topics.
- 4.10(3) Language acquisition: A competent world languages teacher understands second language acquisition theories and their applications to teaching methodologies, and is able to:
- 4.10(3)(a) apply second language acquisition theories which can be used to help students develop proficiency, increase knowledge and strengthen cognitive skills.
 - 4.10(3)(b) articulate curriculum and instruction to ensure a sequence of age-appropriate learning experiences, progressing from a simple to a more advanced use of the language.
 - 4.10(3)(c) understand the proficiency range levels as defined by the American Council on the Teaching of Foreign Languages.
- 4.10(4) Diversity of learners: A competent world languages teacher understands how learners differ in their knowledge, experiences, abilities and approaches to language learning; creates interactive, engaging and supportive learning environments that encourage student self-motivation and promote their language learning and understanding; and is able to:
- 4.10(4)(a) demonstrate an understanding of child and adolescent development to create a supportive learning environment for each student.

- 4.10(4)(b) create an inclusive, caring, challenging and stimulating differentiated classroom environment in which meaningful communication in the target language occurs and in which all students learn through active participation.
- 4.10(4)(c) promote a learning environment that encourages lifelong learning and that goes beyond the classroom to include families and communities.
- 4.10(4)(d) provide learning experiences that reflect learner diversity.
- 4.10(4)(e) use a variety of language-appropriate resources, available technologies and current state world language standards which meet the instructional and linguistic needs of all students and foster critical and creative thinking.
- 4.10(5) Colorado Academic Standards in world languages in planning and instruction: A competent world languages teacher understands and uses the current Colorado Academic Standards in world languages to make instructional decisions and integrate them into curricular planning, and is able to:
 - 4.10(5)(a) demonstrate an understanding of the Colorado Academic Standards in world languages and use them as a basis for instructional planning.
 - 4.10(5)(b) align K-12 world language curriculum and instruction with the Colorado Academic Standards in world languages and local school district policies.
 - 4.10(5)(c) integrate the Colorado Academic Standards in world languages into their classroom practice.
 - 4.10(5)(d) use the Colorado Academic Standards in world languages to select and integrate texts including authentic texts, use technology, and adapt and create instructional materials for use in communication.
- 4.10(6) Assessment of languages and cultures and impact on student learning: A competent world languages teacher designs ongoing assessments using a variety of assessment models to show evidence of K-12 students' ability to communicate in the instructed language in interpersonal, interpretive and presentational modes; expresses understanding of cultural and literary products, practices and perspectives of the instructed language; and is able to:
 - 4.10(6)(a) design ongoing, authentic performance assessments using a variety of assessment models for all learners.
 - 4.10(6)(b) reflect on and analyze the results of student assessments and adjust instruction accordingly.
 - 4.10(6)(c) use data to inform and strengthen instruction.
 - 4.10(6)(d) interpret the results of student performances to all stakeholders in the community.
 - 4.10(6)(e) build student responsibility for his/her own learning.
- 4.10(7) Professional learning and reflection: A competent teacher of world languages engages in ongoing professional learning opportunities to strengthen personal linguistic, cultural and pedagogical competence and promote reflection on practice, and in so doing is able to:
 - 4.10(7)(a) demonstrate an understanding of the value of professional learning and reflection on instructional practice and professional growth.

- 4.10(7)(b) continually evaluate the effects of personal choices and their impact on student learning.
- 4.10(7)(c) reflectively evaluate the effect and impact of professional learning choices on instructional practice and student achievement.
- 4.10(7)(d) demonstrate an understanding of their professional responsibility to keep current with events relevant to the cultures of the target language.
- 4.10(7)(e) demonstrate an understanding of professional growth opportunities such as membership in professional organizations, accessing professional journals, attending conferences and study and/or travel abroad.
- 4.10(8) Advocacy: A competent teacher of world languages articulates the role and value of languages and cultures to interact successfully in the global community and is able to:
 - 4.10(8)(a) articulate the role and value of languages and cultures in preparing students to interact in the global community.
 - 4.10(8)(b) foster relationships with school colleagues, families and agencies in the larger community to support students' language learning and student achievement.
- 4.10(9) American Sign Language (ASL). To be endorsed in American Sign Language, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program; have completed an approved program for the preparation of American Sign Language teachers including prescribe field experience and student teaching requirements; and have demonstrated the competencies for American Sign Language.
- 4.10(10) The world language educator shall self-assess the effectiveness of instruction based on the achievement of students and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.

4.11 Health (Grades K-12)

To be endorsed in health, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program including prescribed field experience and student teaching requirements; have completed an approved program in health; be knowledgeable about the Colorado Academic Standards in comprehensive health and physical education and have demonstrated the competencies specified below:

- 4.11(1) The health educator is knowledgeable about the content of physical and mental health and is able to incorporate the following into the various aspects of health instruction and delivery, with recognition of the cultural, societal and familial sensitivity necessary to handle often controversial subject matter with students of differing personal characteristics and circumstances, backgrounds and developmental stages:
 - 4.11(1)(a) information about ecology and its interaction with society as related, but not limited to, studies in such fields as the biological and behavioral sciences.
 - 4.11(1)(b) bases for students to make informed and healthy life choices about current and continuing health issues of individuals in a society including, but not limited to: physical, emotional and social health; alcohol, tobacco and other controlled substances; prescription medication; wellness, nutrition and exercise; disease prevention and control; and communicable and non-communicable diseases.

- 4.11(1)(c) information on individual rights, options and responsibilities with regard to health care.
- 4.11(1)(d) information about physical and psychological human growth and development, as well as the status of and matters related to individual, self-monitored and family health, as relevant and appropriate to a health curriculum and program and the age and/or grade level of students.
- 4.11(2) The health educator is knowledgeable about evaluation and identification of criteria for evaluation and is able to articulate effectively to students regarding the use of valid and reliable health information and resources including, but not limited to:
 - 4.11(2)(a) consumer health; public and school health care programs; informed selection of health products and services; consumer protection agencies and other related resources; health fallacies and superstitions; health insurance and plans; health care systems; health care-related technology; and accurate information-technology and other informational sources.
 - 4.11(2)(b) identification of emerging health problems and issues in general, and specifics related to urban, suburban and rural areas.
- 4.11(3) The health educator is knowledgeable about and is able to effectively articulate to students the dynamics of accidents and how to create conditions conducive to safe living.
- 4.11(4) The health educator is knowledgeable about and able to effectively promote health and health care careers to students.
- 4.11(5) The health educator must be able to effectively integrate into instruction the following skills: collaboration, critical thinking and reasoning, information literacy, self-direction and invention.
- 4.11(6) The health educator shall self-assess the effectiveness of instruction based on the achievement of students and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.

4.12 Family and Consumer Sciences (Grades 7-12)

To be endorsed in family and consumer sciences, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program including prescribed field experience and student teaching requirements, which must include but not be limited to general career/technical knowledge about the world of work and the skill and processes that cut across industries, as well as industry-specific knowledge and demonstrations of proficiency in the use of a variety of technological applications in a lab and/or natural setting; have completed an approved program in family and consumer sciences; and have demonstrated the competencies listed below:

- 4.12(1) The family and consumer sciences educator must have extensive preparation in family and consumer sciences and be knowledgeable about and able to effectively instruct students regarding the following content areas:
 - 4.12(1)(a) human development and parenting including, but not limited to:
 - 4.12(1)(a)(i) theories, principles and sequences of human development – prenatal through late adulthood – and family structures and functions, as they influence, support and/or inhibit human development;
 - 4.12(1)(a)(ii) the family as the basis of a strong society including, but not limited to, the historical and cultural elements of family structures; what is essential for a

healthy marriage (i.e., commitment and determination to build a long-lasting relationship); role expectations; nuclear and extended family interactions; and universal core values (e.g., caring, responsibility, respect, trust, relationships, et.al.);

4.12(1)(a)(iii) cultural and individual community differences; social issues; ethical conduct; and legal rights, obligations and responsibilities;

4.12(1)(a)(iv) selection of a spouse and development of a parenting partnership;

4.12(1)(a)(v) developmentally appropriate parenting skills including, but not limited to nurturing, intellectual and creative stimulation; health, nutrition and exercise; safety and constructive discipline of children; and

4.12(1)(a)(vi) strategies for balancing work and family life including, but not limited to time and financial management and criteria for evaluating family support services (e.g., child and elder care).

4.12(1)(b) nutrition and foods including, but not limited to:

4.12(1)(b)(i) food chemistry, preparation, packaging, food allergies, the global market and biotechnology;

4.12(1)(b)(ii) dietary elements and determination of adequacy; sources and functions of nutrients; criteria for making appropriate nutritional, fitness/exercise and wellness choices -- with recognition given to cultural considerations and style of life -- and health and nutrition-related issues, conditions and diseases;

4.12(1)(b)(iii) food safety, personal hygiene and safety practices/standards according to industry standards, including official and/or accepted industry hygiene standards; and

4.12(1)(b)(iv) use of cooking tools and equipment; methods and terminology; use and conversion of recipes; incorporation of research, preparation, product and general technology; evaluation, use and preparation of convenience foods; and the basic skills of food preparation, balance, portion control and presentation.

4.12(1)(c) resource management including, but not limited to:

4.12(1)(c)(i) personal finance management principles and skills of the various life stages, such as budgeting, banking, saving and investment, credit (its use and misuse), insurance, taxes, estate planning and consideration of the effect of legislation, public policy and economic conditions on personal financial choices;

4.12(1)(c)(ii) consumer market skills such as rights and responsibilities, laws and public policy, comparative shopping, evaluation of advertising claims and consumer complaints, resources and options;

4.12(1)(c)(iii) consumer resource management skills such as values and goals, community resources, sound criteria for decision-making and information, technology and human resources;

4.12(1)(c)(iv) the active role consumers can play in business and public decision-making and policy-formation with regard to housing, clothing, transportation, energy conservation, environmental issues, etc.;

- 4.12(1)(c)(v) the principles and elements of design as applied to clothing and the housing environment and the consideration and selection of clothing and housing, as based on historical, psychological, physical, social and cultural needs in accordance with personal preference; and
- 4.12(1)(c)(vi) selection, use, care and disposal of fibers, fabrics and finishes as specifically applied to clothing and to the housing environment.
- 4.12(1)(d) interpersonal relationships including, but not limited to:
 - 4.12(1)(d)(i) individual self-concept, wellness and responsible decision-making related to personal choices throughout various life stages in areas such as substance abuse, sexuality, violence and conflict resolution;
 - 4.12(1)(d)(ii) personal goal-setting and decision-making; work ethic; communication, leadership, teamwork and negotiations skills; and coping strategies to handle and manage peer pressure, change and crisis situations; and
 - 4.12(1)(d)(iii) cultural and style of life choices, social issues, and legal and ethical rights and responsibilities in a variety of life-affecting situations.
- 4.12(2) The family and consumer sciences educator is able to:
 - 4.12(2)(a) use a variety of applicable assessment strategies to determine the learning needs, comprehension and levels of experience of participating students.
 - 4.12(2)(b) design programs and activities for students that incorporate core and other academic skills and abilities with career/technical content to provide students relevant and current information about the key issues, concepts, competencies and skills necessary for personal application by the student and/or for work/employment in a specific industry.
 - 4.12(2)(c) instruct students about employment basics and employability skills, family and consumer studies career pathways and qualities necessary to function in the work place.
 - 4.12(2)(d) inform students about careers in family and consumer sciences professions and related fields, such as service-oriented industries, and about the role professional organizations play in the field.
 - 4.12(2)(e) evaluate, purchase and maintain an inventory of appropriate equipment, technology, materials and products.
 - 4.12(2)(f) demonstrate for and instruct students about necessary safety practices and procedures.
 - 4.12(2)(g) demonstrate for and instruct students in the proper identification, storage, handling, use and disposal of food.
 - 4.12(2)(h) articulate to students a well-founded philosophy regarding career and technical education to keep students aware of current issues in the field and present relevant and appropriate issues with clarity and without bias.
 - 4.12(2)(i) arrange for and supervise relevant and appropriate experiences and opportunities in simulated or real-world environments to help students base their decision-making on first-hand knowledge and sound criteria, by providing:

- 4.12(2)(i)(i) coordination for cooperative/internship programs and off-site experiences for students by maintaining business/industry/inter-and intra-school partnerships and/or other community and school district contacts;
 - 4.12(2)(i)(ii) students with a wide variety of opportunities to gain experience with and be able to exercise initiative in applying the skills and abilities required in family and consumer sciences, and to earn awards and recognition, through participation in student vocational and/or community service organizations; and
 - 4.12(2)(i)(iii) supervision of students during community service, travel, conferences and related instructional family and consumer sciences activities.
- 4.12(3) The family and consumer sciences educator is able to demonstrate the value of family and consumer sciences professions by seeking professional development and by remaining current in the field and participating in appropriate professional organizations.
- 4.12(4) The family and consumer sciences educator is able to develop additional resources, as appropriate and necessary, from and within the community and the school itself.
- 4.12(5) The family and consumer sciences educator shall self-assess the effectiveness of instruction based on the achievement of students and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.

4.13 Technology Education (Grades 7-12)

To be endorsed in technology education, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program including prescribed field experience and student teaching requirements; have completed an approved program in technology education; and have demonstrated the competencies specified below:

- 4.13(1) Knowledge: The beginning technology educator must have:
- 4.13(1)(a) a basic understanding of the history of technology education and the historical development and trends of technology and technology education.
 - 4.13(1)(b) extensive preparation in technology systems and processes and demonstrate applied knowledge with respect to the following areas:
 - 4.13(1)(b)(i) communication/information including verbal, written, graphic and electronic components;
 - 4.13(1)(b)(ii) transportation including power, energy and mechanical systems; and
 - 4.13(1)(b)(iii) production including construction, manufacturing, authoring, design and prototyping.
 - 4.13(1)(c) additional preparation and demonstrated applied knowledge in the natural physical sciences, including environmental science, as used in technological systems and processes.
 - 4.13(1)(d) additional preparation and demonstrated applied knowledge in mathematics as used in technological systems and processes.
 - 4.13(1)(e) extensive preparation in the principles of contextual learning methodology.

- 4.13(1)(f) a knowledge and understanding of workforce preparation documents and employability skills and standards.
- 4.13(1)(g) a basic understanding of the principles of high-productivity organizations from business and industry.
- 4.13(1)(h) a basic understanding of the economic, political and legal consequences inherent within the application of technological systems and processes to our society.
- 4.13(1)(i) extensive preparation in application of the various tools accessible by students to facilitate improved self-learning.
- 4.13(1)(j) a basic understanding of the methodologies of research into projected developments and applications of emerging technologies.
- 4.13(1)(k) an understanding of good questioning skills and techniques to be used with students and peers to collect, organize and interpret information.
- 4.13(1)(l) the knowledge and understanding to organize and manage a student organization.
- 4.13(2) Performance: The beginning technology educator is able to:
 - 4.13(2)(a) manage all student work areas in a safe and prudent manner and guide students in the safe use of tools, systems and processes in school-based and work-based learning sites.
 - 4.13(2)(b) guide students to become knowledgeable in:
 - 4.13(2)(b)(i) the application of academic concepts from math, science and communications as they apply to technological systems and processes;
 - 4.13(2)(b)(ii) the allocation of resources such as time, money, materials, facilities and human resources;
 - 4.13(2)(b)(iii) the acquisition, evaluation, organization, interpretation and communication of information related to technological systems and processes;
 - 4.13(2)(b)(iv) the selection and application of technology appropriate to tasks;
 - 4.13(2)(b)(v) the maintenance of systems of information, technology and records; and
 - 4.13(2)(b)(vi) the application of relevant conflict resolution techniques as applied to the workplace.
 - 4.13(2)(c) work as a team member in conjunction with academic and other occupational educators to develop systems that support learning across curricular disciplines.
 - 4.13(2)(d) demonstrate competency in the management of equipment, materials, supplies and people.
 - 4.13(2)(e) demonstrate good questioning skills and techniques to be used with students and peers to collect, organize and interpret information.
 - 4.13(2)(f) employ interpersonal and organizational skills to develop an ongoing working relationship with community business and industry partners.

- 4.13(2)(g) communicate the possible career pathways for students entering an occupation in the communications, transportation, architecture, construction, manufacturing and environmental areas.
- 4.13(2)(h) guide students in the use of communication technologies to research occupational clusters occupational opportunities.
- 4.13(2)(i) guide students to develop problem-solving techniques or adopt problem-solving techniques from other sources.
- 4.13(2)(j) demonstrate the proper use of tools, systems and processes appropriate to the course content with respect to the acceptable standards of business and industry.
- 4.13(2)(k) construct individual and cooperative learning experiences which integrate school-based and work-based learning for students utilizing student-centered approaches.
- 4.13(2)(l) reinforce the academic concepts by demonstrating their practical applications.
- 4.13(3) The technology educator shall self-assess the effectiveness of instruction based on the achievement of students and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.

4.14 Secondary Mathematics (Grades 7-12)

To be endorsed in secondary mathematics, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program, including prescribed field experience and student teaching requirements; have completed an approved program in mathematics; be knowledgeable about the Colorado Academic Standards in mathematics in grades 7 through 12; and have demonstrated the competencies specified below:

- 4.14(1) Develop in students an understanding and use of:
 - 4.14(1)(a) number sense, properties and operations.
 - 4.14(1)(b) patterns, functions and algebraic structures.
 - 4.14(1)(c) measurement.
 - 4.14(1)(d) data analysis, statistics and probability.
 - 4.14(1)(e) functions and use of variables.
 - 4.14(1)(f) shape, dimension and geometric relationships.
- 4.14(2) The mathematics educator is able to effectively demonstrate to students and instruct:
 - 4.14(2)(a) approaches to problem-solving that utilize mathematical content in identifying, analyzing, formulating and solving problems that occur in mathematical processes and everyday situations.
 - 4.14(2)(b) the utilization of mathematical ideas, both verbally and in writing, using both everyday language and mathematical terminology.
 - 4.14(2)(c) the utilization of verbal and written discourse, between teacher and students and among students, to develop and extend students' mathematical understanding.

- 4.14(2)(d) the construction and evaluation of mathematical conjectures and arguments to validate one's own mathematical thinking.
- 4.14(2)(e) independent study in mathematics.
- 4.14(2)(f) the use of mathematics in studying patterns and relationships.
- 4.14(2)(g) the interrelationships within mathematics; how to connect concrete, pictorial and abstract representations; and the connections between mathematics and other disciplines and real-world situations through the selection of appropriate applications from such fields as natural sciences, social sciences, business and engineering, and is able to:
 - 4.14(2)(g)(i) utilize a wide variety of resource materials, including, but not limited to, manipulative materials, graphing calculators, computers and other technologies as tools in learning and for the application(s) of mathematics;
 - 4.14(2)(g)(ii) utilize assessment data to monitor students' acquisition of mathematical skills and abilities and in the process of determining appropriate delivery of instruction based on identified student need and to select appropriate mathematical tasks to reinforce and promote students' development of mathematical concepts and skills;
 - 4.14(2)(g)(iii) create an engaging and effective environment in which all students develop mathematically in order to participate more fully in a technologically based society;
 - 4.14(2)(g)(iv) create an environment in which reflection, uncertainty and inquiry are incorporated in the learning of mathematical skills, abilities and concepts; and
 - 4.14(2)(g)(v) apply appropriate knowledge of current research in the teaching and learning of mathematics and incorporate national, state and local guidelines related to mathematics instruction.
- 4.14(3) The secondary mathematics teacher is knowledgeable about curriculum and planning and trained in evidence-informed practices in mathematics, including identifying and utilizing acceleration and intervention strategies to help students who are below grade level or struggling in mathematics, children with disabilities and students who are English language learners.
- 4.14(4) The mathematics educator shall consistently seek out professional development in the field of mathematics, which can provide enhanced knowledge, skills and abilities in the content area and participate in professional organizations appropriate and relevant to the field.

4.15 Music (Grades K-12)

To be endorsed in music, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program including prescribed field experience and student teaching requirements; have completed an approved program in music; be knowledgeable about the Colorado Academic Standards in music; and have demonstrated the competencies specified below:

- 4.15(1) The music educator is knowledgeable about the content and creative processes of music and is able to:

- 4.15(1)(a) teach the historical and cultural context of music including, but not limited to, global musical styles, techniques and traditions over time and acknowledging music in society as creative, expressive, communicable and social.
- 4.15(1)(b) use a variety of approaches to critically analyze, observe and critique a variety of styles, genres, aesthetics and technical aspects of music.
- 4.15(1)(c) develop music literacy in students, demonstrating ways to read, write and communicate using the language of music.
- 4.15(1)(d) provide informed demonstration and identification of a variety of techniques and styles of music with confidence, expression, accuracy and intent.
- 4.15(1)(e) use a variety of approaches to teach students to design, write, problem-solve and innovate to find their own unique musical voice.
- 4.15(2) The music educator is able to instruct about, effectively demonstrate and provide experiences for students in various areas of music pedagogical theory and practice including, but not limited to:
 - 4.15(2)(a) determining and interpreting meaning in musical works.
 - 4.15(2)(b) methods of teaching music to students, as age and grade appropriate, and to other educators, regarding the direction and selection of musical repertoire; communication of ideas through music; distinguishing musical forms and styles; creation of a variety of musical works; employing skills related to musical performances; evaluation of musical works and relating music to diverse cultures.
 - 4.15(2)(c) knowledge and method of how music relates, informs, connects and transfers to other subjects and disciplines.
 - 4.15 (2)(d) knowledge and the ability to envision and implement the creative cyclical process, including applying and demonstrating a variety of music theory skills, creating musical works; expressing music in a performance setting; and critiquing, evaluating and refining musical works.
- 4.15 (3) The music educator shall facilitate students' learning in order to develop critical-thinking and reasoning skills, information literacy, collaboration, self-direction and invention skills for lifelong learning about music including the personal pursuit of further experience in music.
- 4.15 (4) The music educator shall self-assess and act upon feedback regarding the effectiveness of instruction based on the achievement of students and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.

4.16 Physical Education (Grades K-12)

To be endorsed in physical education, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program including prescribed field experience and student teaching requirements; have completed an approved program in physical education; be knowledgeable about the Colorado Academic Standards in comprehensive health and physical education; and have demonstrated the competencies specified below:

- 4.16(1) The physical education educator is knowledgeable about the content of physical education and is able to:

- 4.16(1)(a) articulate effectively to students, other educators and interested stakeholders the socio-cultural, philosophical and psychological foundations of physical education, including the historical development of play, games, dance and sports, and the study of human growth and development.
- 4.16(1)(b) effectively articulate the physical and biological science foundations of physical education including, but not limited to, such areas as human anatomy, exercise physiology, kinesiology and health.
- 4.16(1)(c) effectively instruct students about the fundamentals of physical movement including the patterns and types of movement, gymnastics, tumbling, games, team and individual sports, physical fitness and perceptual motor activities.
- 4.16(2) The physical education educator is knowledgeable about and able to demonstrate and effectively instruct students at appropriate age/grade levels about:
 - 4.16(2)(a) four or more individual and/or dual activities including, but not limited to, wrestling, track and field, tennis, bowling, golf, badminton, archery, rodeo, gymnastics, aquatics, rhythm, dance, weight-training and fitness.
 - 4.16(2)(b) four or more team sports and/or games including, but not limited to, baseball, softball, basketball, lacrosse, field hockey, water polo, flag and contact football, soccer, volleyball and skiing.
- 4.16(3) The physical education educator is knowledgeable about and able to demonstrate the organization, planning, administering, teaching and evaluating of a program of physical education including, but not limited to:
 - 4.16(3)(a) adaptive physical education.
 - 4.16(3)(b) first aid.
 - 4.16(3)(c) prevention and care of athletic injuries.
 - 4.16(3)(d) rules and officiating.
 - 4.16(3)(e) analyses and techniques involved with competitive sports.
- 4.16(4) The physical education educator provides students with motivation and encouragement to establish attitudes and behaviors and to pursue activities which will result in lifetime fitness.
- 4.16(5) The physical education educator is able to effectively integrate into instruction the following skills: collaboration, critical thinking and reasoning, information literacy, self-direction and invention.
- 4.16(6) The physical education educator shall self-assess the effectiveness of instruction based on the achievement of students and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.

4.17 Science (Grades 7-12)

To be endorsed in science, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program including prescribed field experience and student teaching requirements; have completed an approved program in science; be knowledgeable about the Colorado Academic Standards in science; and have demonstrated the competencies specified below:

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- 4.17(1) The science educator is knowledgeable about the content, concepts and skills of the sciences and is able to effectively instruct students regarding physical, life and earth sciences and applicable mathematics.
- 4.17(2) The science educator must have completed an area or areas of concentration in, demonstrate knowledge of, and effectively instruct students about one or more areas selected from:
- 4.17(2)(a) physics including, but not limited to, general and experimental physics, mechanics, electricity, magnetism, quantum and atomic physics, sound, and optics.
 - 4.17(2)(b) chemistry including, but not limited to, general chemistry, organic chemistry, inorganic chemistry, analytical chemistry and physical chemistry.
 - 4.17(2)(c) biology including, but not limited to, general biology, environmental biology, biotechnology, genetics, evolution, human anatomy, ecology, molecular biology, and matter and energy in living systems.
 - 4.17(2)(d) earth and space science including, but not limited to, historical and physical geology, astronomy, environmental science, meteorology, oceanography, geomorphology, stratigraphy, mineralogy and earth systems.
 - 4.17(2)(e) general science including, but not limited to, general chemistry, physics, biology, earth and space science, environmental science and applicable mathematics.
- 4.17(3) The science educator is knowledgeable about and is able to:
- 4.17(3)(a) effectively articulate to students current issues and events affecting or affected by science; age-/grade-appropriate controversial topics from multiple science perspectives, including historical and philosophical bases; and an analytical approach to students with clarity and without bias.
 - 4.17(3)(b) effectively demonstrate to students and instruct students on the use of a wide variety of science tools, primary and secondary source materials, print resources, laboratory and natural settings, and technological resources.
 - 4.17(3)(c) effectively instruct students about the design of experiments; data reporting; use of appropriate and relevant technology; interpretation of results; and the steps which may be taken in the presentation of the processes involved and the results obtained.
 - 4.17(3)(d) effectively instruct students in core scientific practices which include, but are not limited to, asking questions and defining problems; analyzing and interpreting data; engaging in argument from evidence; constructing explanations and designing solutions; developing and using models; planning and carrying out investigations; obtaining, evaluating, and communicating information; and using mathematics and computational thinking.
 - 4.17(3)(e) effectively integrate technology into instructional and assessment strategies, as appropriate to science education and the learner.
 - 4.17(3)(f) effectively instruct students about the interconnected nature of science as it is practiced and experienced in the real world, including the connections between and among the various science disciplines and within other disciplines.
 - 4.17(3)(g) effectively demonstrate for and instruct students about the basic elements of the nature of science including, but not limited to, inquiry, curiosity, discovery, openness to new ideas and skepticism.
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- 4.17(3)(h) effectively communicate to students the historical and dynamic nature of science.
- 4.17(3)(i) demonstrate for students the connection between an inquiry-based lesson and a larger conceptual-based module and the linkage of both to state-approved student science academic standards.
- 4.17(3)(j) effectively demonstrate for and instruct students in the linkage(s) between curriculum, instruction and assessment as they relate to state-approved student science academic standards.
- 4.17(3)(k) effectively demonstrate for and instruct students about safety considerations in science instruction and in the science classroom including, but not limited to, proper use, storage and disposal or maintenance of biological, chemical and scientific equipment and specimens.
- 4.17(3)(l) instruct and supervise students in the proper preparation and use of laboratory equipment and materials.
- 4.17(3)(m) evaluate laboratory settings, equipment, materials and procedures to identify and manage the resolution of potential safety hazards.
- 4.17(3)(n) provide solutions to equipment problems and be able to make minor adjustments in the operation of equipment.
- 4.17(3)(o) incorporate into planning information related to state and federal regulations, legal issues and guidelines pertaining to scientific materials and specimens.
- 4.17(4) The science educator shall self-assess the effectiveness of instruction based on the achievement of students and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.

4.18 Social Studies (Grades 7-12)

To be endorsed in social studies, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program including prescribed field experience and student teaching requirements; have completed an approved program in social studies; be knowledgeable about and able to instruct students in the Colorado Academic Standards in social studies; and have demonstrated the competencies specified below:

- 4.18(1) The social studies educator is knowledgeable about social studies including history, geography, political science and economics, and is able to effectively instruct students about:
 - 4.18(1)(a) history including, but not limited to, Colorado, the United States and world history.
 - 4.18(1)(b) geography including, but not limited to, cultural and physical geography, human geography and globalization.
 - 4.18(1)(c) political science including, but not limited to, that of the United States and comparative state, local and other national governments.
 - 4.18(1)(d) economics including, but not limited to, that of comparative economic theories, applications and institutions, past and present; micro-, macro- and global economics; and personal financial literacy.

- 4.18(1)(e) the behavioral and social sciences including, but not limited to, psychology, sociology, anthropology and concepts related and integral to the historical and current organization of culture and society.
- 4.18(2) The social studies educator is knowledgeable about and is able to:
- 4.18(2)(a) effectively demonstrate and instruct students about civil discourse in the classroom, including the utilization of oral and written communication and presentation.
 - 4.18(2)(b) effectively analyze social and historical events from multiple perspectives for students and articulate an appropriate analytical approach with clarity and balance and without bias.
 - 4.18(2)(c) effectively integrate discussion of and address with students grade level/age-appropriate current events and issues, including controversial issues, with clarity and balance and without bias.
 - 4.18(2)(d) effectively instruct students about the use of primary and secondary source documents acquired through appropriate use of technology and other relevant means as part of informed research, and in the acquisition and enhancement of knowledge and skills.
 - 4.18(2)(e) effectively teach students the skills of data analysis and interpretation.
 - 4.18(2)(f) promote to students appropriate, relevant, positive and productive community service and experiences.
 - 4.18(2)(g) provide students with identifiable connections between the various social science disciplines and other disciplines.
 - 4.18(2)(h) implement informal and formal assessment tools relevant and appropriate to the social studies classroom, and apply assessment data to planning for student instruction.
 - 4.18(2)(i) effectively demonstrate and instruct students about elements of social studies applications including, but not limited to, inquiry, an openness to new ideas, skepticism, analysis, problem-solving, decision-making and active citizenship, and provide opportunities for students to utilize these skills.
 - 4.18(2)(j) integrate into instruction and provide opportunities for students to develop the skills of collaboration, critical-thinking and reasoning, information literacy, self-direction and invention.
- 4.18(3) The social studies educator shall self-assess the effectiveness of instruction based on the achievement of students and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.

4.19 Reserved

4.20 Dance (Grades K-12)

To be endorsed in dance, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program including prescribed field experience and student teaching requirements; have completed an approved program in dance; be knowledgeable about and able to instruct students in the Colorado Academic Standards in dance; and have demonstrated the competencies specified below:

4.20(1) The dance educator is knowledgeable about the art of dance and is able to:

4.20(1)(a) teach the historical and cultural context including, but not limited to, global dance styles and traditions over time, acknowledging dance in society as creative, expressive, communicable and social.

4.20(1)(b) instruct students to use criticism and analysis to reflect upon and understand new works, reconstructions and masterpieces.

4.20(1)(c) apply the skillful use of dance literacy and the use of traditional and/or non-traditional notation systems via words, symbols and/or media technology.

4.20(1)(d) implement the choreographic process as the art of making dance using form, intent, dynamics and principles of time, space and energy, structure and design.

4.20(1)(e) help students develop the skills and technique that produce competence and confidence during performance, and the ability to communicate choreographic intent.

4.20(2) The dance educator is able to instruct, effectively demonstrate and provide experiences for students in various areas of dance pedagogical theory and practice including, but not limited to:

4.20(2)(a) dance theory aligned with safe and developmentally appropriate pedagogical approaches.

4.20(2)(b) methods of teaching dance to students, as age and grade appropriate, and to other educators as related, but not limited to, the creative process; direction and selection of all performance repertoire and productions in the school setting; and performance, evaluation, choreography, and cultural and historical context.

4.20(2)(c) knowledge and method of how dance relates, informs, connects and transfers to other subjects and disciplines.

4.20(2)(d) knowledge and the ability to envision and implement the creative cyclical process, including the skills of movement, technique and performance; the ability to create, compose, and choreograph; an understanding of historical and cultural context, and the ability to reflect, connect and respond.

4.20(3) The dance educator shall facilitate students' learning in order to develop critical-thinking and reasoning skills, information literacy, collaboration, self-direction and invention skills for lifelong learning about dance including the physical benefits and personal pursuit of further experience in dance.

4.20(4) The dance educator shall self-assess and act upon feedback regarding the effectiveness of instruction based on the achievement of students and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.

4.21 Culturally and Linguistically Diverse Education (Grades K-12)

To be endorsed in culturally and linguistically diverse (CLD) education, an applicant must hold an earned bachelor's degree or higher from an accepted institution of higher education; must hold a Colorado initial or professional teacher or special services license; and must have demonstrated competencies specified below by completion of a Colorado State Board of Education-approved program for the preparation of an educator of culturally and linguistically diverse student populations in accordance with 3.02(1) or by

verification of 24 semester hours of specific coursework from an accepted institution of higher education as determined by the Department of Education through a transcript review in accordance with 3.02(2)(a).

4.21(1) The educator of CLD student populations must be knowledgeable about, understand and be able to use the major theories, concepts and research related to language acquisition and language development for CLD students. In support of student learning, the candidate must demonstrate understanding and ability to implement research-based knowledge about:

4.21(1)(a) linguistics that include orthography, phonology, morphology, vocabulary, syntax, semantics and pragmatics applied to English language development for culturally and linguistically diverse students.

4.21(1)(b) instructional practices that support acquisition of English language as an additional language for CLD students.

4.21(1)(c) written and oral discourse that includes intention and functions of speech, genres and organizational features and patterns.

4.21(1)(d) sociolinguistics that include cultural references, register, varieties of dialects and accents, and nonverbal communication.

4.21(2) The educator of CLD student populations must be knowledgeable about, understand and be able to apply the major theories, concepts and research related to research-based literacy development for CLD students. In support of student learning, the CLD educator must demonstrate understanding and ability to implement research-based knowledge about:

4.21(2)(a) research-based literacy instruction including the identification and use of linguistic interdependence to support development of the components of language development (listening, speaking, reading, writing and critical-thinking) in English for CLD students.

4.21(2)(b) the basic elements of research-based literacy and the ability to provide effective instruction that is systematic, explicit, comprehensive and effective in support of the English language developmental needs of CLD students.

4.21(2)(c) language and literacy development for CLD students for social and instructional purposes in the school setting, with an emphasis on communication of information, ideas and concepts necessary for academic success, particularly in language arts, mathematics, science and social studies.

4.21(2)(d) the contribution of native language to acquisition of English as an additional language.

4.21(2)(e) the distinction between language differences and learning disabilities.

4.21(3) The educator of CLD student populations must understand and implement strategies and select materials to aid English language and content learning. In support of student learning, the CLD educator must demonstrate understanding of and the ability to implement research-based knowledge about:

4.21(3)(a) the functions of the English language to second language learners to support their development of both social and academic language skills.

4.21(3)(b) effective instructional techniques, methodologies and strategies to develop English language literacy and to meet the diverse needs of second language learners, including those students with learning disorders.

- 4.21(3)(c) effective instruction and instructional planning that is systemic, sequential, well-articulated and delivered in an engaging environment.
- 4.21(3)(d) selection and utilization of instructional materials and resources that are age-, grade level- and language proficiency-appropriate, that are aligned with the curriculum, English language proficiency standards and English language arts content standards, and that maintain and/or improve student achievement.
- 4.21(3)(e) maintenance and support of high academic performance standards and expectations for CLD student populations.
- 4.21(3)(f) providing instructional strategies that integrate the development of English language literacy and content literacy to improve student access to content curricula, particularly in language arts, mathematics, science and social studies.
- 4.21(4) The educator of CLD student populations must be knowledgeable about, understand and be able to apply the major theories, concepts and research related to culture, diversity and equity in order to support academic access and opportunity for CLD student populations. In support of student learning, the CLD educator must be able to demonstrate knowledge and understanding of:
 - 4.21(4)(a) Colorado state law and federal law, history and socio-political context related to CLD student populations, education, multicultural education and bilingual education.
 - 4.21(4)(b) the role of culture in language development and academic success.
 - 4.21(4)(c) the relation of cultural identity and heritage language to English language learning and academic success.
 - 4.21(4)(d) the contribution of heritage language maintenance to the development of English language literacy.
 - 4.21(4)(e) the relationship of culture to family and community involvement in schools in order to communicate, collaborate and enhance parental involvement.
- 4.21(5) The educator of CLD student populations must be knowledgeable about, understand and be able to use progress monitoring in conjunction with formative and summative assessments to support student learning. In support of student learning, the candidate must demonstrate knowledge and ability to:
 - 4.21(5)(a) assist content teachers in the interpretation of summative assessments of content knowledge, including national content assessments and Colorado-approved content assessments, for the purpose of guiding instruction and learning for CLD students.
 - 4.21(5)(b) administer and interpret the results of summative assessments of English language proficiency, including national and Colorado-approved content assessments for the purpose of assessing English proficiency and guiding instruction.
 - 4.21(5)(c) develop, administer and interpret the results of formative assessments and progress monitoring of English language proficiency that are appropriate for the language proficiency level of the student for the purpose of guiding instruction.
 - 4.21(5)(d) communicate and collaborate with other educators, special services providers and student population family members to identify and assist in the implementation of a comprehensive instructional plan that responds to the socio-economic, academic and linguistic needs of CLD students.

- 4.21(6) The culturally and linguistically diverse education educator shall self-assess the effectiveness of instruction based on the achievement of students and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.

4.22 Culturally and Linguistically Diverse (CLD) Bilingual Education Specialist (Grades K-12)

To be endorsed as a CLD bilingual education specialist, an applicant must hold an earned bachelor's degree or higher from an accepted institution of higher education; must hold a Colorado initial or professional teacher license; must have completed an approved program for the preparation of an educator of bilingual education; and must have demonstrated the competencies specified below:

- 4.22(1) The CLD bilingual education specialist must be knowledgeable about and able to demonstrate:

- 4.22(1)(a) a high level of proficiency in the standards noted in rule 4.22(1)-(5);
- 4.22(1)(b) ability to implement research-based knowledge to effectively deliver literacy and content instruction in a heritage language of a current Colorado student population;
- 4.22(1)(c) research-based knowledge and ability to utilize students' heritage language to help them transition skills and strategies learned in the heritage language to literacy and content areas in English;
- 4.22(1)(d) demonstrate the research-based knowledge and ability to plan and implement lessons to help students make cross-language connections;
- 4.22(1)(e) a high level of biliteracy and academic language proficiency in English and in one other heritage language used by Colorado students – as determined by the Department -- including, but not limited to, reading, writing, listening, oral communication and critical thinking;
- 4.22(1)(f) understanding and ability to implement research-based knowledge to discriminate between effective and ineffective bilingual programs in order to develop and deliver effective research-informed structures and programs that support bilingual development;
- 4.22(1)(g) proficiency and ability to teach in a non-English language; and
- 4.22(1)(h) understanding of research-based knowledge of the culture and history of a heritage language community of Colorado students.

- 4.22(2) The culturally and linguistically diverse education bilingual specialist shall self-assess the effectiveness of instruction based on the achievement of students and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.

4.23 Middle School Mathematics (Grades 6-8)

To be endorsed in middle school mathematics, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed an approved teacher preparation program, including prescribed field experience and student teaching requirements; have completed an approved program in middle school mathematics; be knowledgeable about the Colorado Academic Standards in mathematics grades 6 through 8; and have demonstrated the competencies specified below:

- 4.23(1) Develop in students an understanding and use of:

- 4.23(1)(a) number and quantity;
 - 4.23(1)(b) algebra and functions;
 - 4.23(1)(c) measurement;
 - 4.23(1)(d) data, statistics, and probability; and
 - 4.23(1)(e) geometry.
- 4.23(2) The mathematics educator is able to effectively demonstrate to students and instruct:
- 4.23(2)(a) approaches to problem-solving that utilize mathematical content in identifying, analyzing, formulating and solving problems that occur in mathematical processes and everyday situations;
 - 4.23(2)(b) the utilization of mathematical ideas, both verbally and in writing, using both everyday language and mathematical terminology;
 - 4.23(2)(c) the utilization of verbal and written discourse, between teacher and students and among students, to develop and extend students' mathematical understanding;
 - 4.23(2)(d) the construction and evaluation of mathematical conjectures and arguments to validate one's own mathematical thinking;
 - 4.23(2)(e) independent study in mathematics;
 - 4.23(2)(f) the use of mathematics in studying patterns and relationships;
 - 4.23(2)(g) the interrelationships within mathematics; how to connect concrete, pictorial and abstract representations; and the connections between mathematics and other disciplines and real-world situations through the selection of appropriate applications from such fields as natural sciences, social sciences, business and engineering, and is able to:
 - 4.23(2)(g)(i) utilize a wide variety of resource materials, including, but not limited to, manipulative materials, graphing calculators, computers and other technologies as tools in learning and for the application(s) of mathematics;
 - 4.23(2)(g)(ii) utilize assessment data to monitor students' acquisition of mathematical skills and abilities and in the process of determining appropriate delivery of instruction based on identified student need and to select appropriate mathematical tasks to reinforce and promote students' development of mathematical concepts and skills;
 - 4.23(2)(g)(iii) create an engaging and effective environment in which all students develop mathematically in order to participate more fully in a technologically based society;
 - 4.23(2)(g)(iv) create an environment in which reflection, uncertainty and inquiry are incorporated in the learning of mathematics skills, abilities and concepts; and
 - 4.23(2)(g)(v) apply appropriate knowledge of current research in the teaching and learning of mathematics and incorporate national, state and local guidelines related to mathematics instruction.

- 4.23(3) The middle school mathematics teacher is knowledgeable about curriculum and planning and trained in evidence-informed practices in mathematics, including identifying and utilizing acceleration and intervention strategies to help students who are below grade level or struggling in mathematics, children with disabilities and students who are English language learners.
- 4.23(4) The mathematics educator shall consistently seek out professional development in the field of mathematics, which can provide enhanced knowledge, skills and abilities in the content area, and participate in professional organizations appropriate and relevant to the field.

4.24 Mentor Teacher (Grades K-12)

To be endorsed as a Mentor Teacher, an applicant must hold a valid Colorado professional teacher license, have completed an approved Mentor Teacher training program provided by an educator preparation program and have demonstrated the competencies below. Upon completion of an approved Mentor Teacher training program, the candidate must also have completed at least one full school year of successful experience serving as a Mentor Teacher for a teacher candidate who is participating in clinical practice.

- 4.24(1) The mentor teacher develops instructional leadership skills to advance mentoring, the teaching profession, and equitable outcomes for every student.
- 4.24(1)(a) Develops and continuously pursues professional growth goals and short-term goal setting that are informed by mentor and beginning teacher data of practice and student learning data.
- 4.24(1)(b) Collects and analyzes mentor and beginning teacher data of practice to inform instructional mentoring decisions that are based on short-term goals and will improve beginning teacher practice and the academic, social, and emotional learning of every student
- 4.24(1)(c) Supports the work of collaborative partnerships with school and district instructional leaders, teacher leaders, and school communities to advance the teaching profession and advocate for equitable outcomes for every student.
- 4.24(1)(d) Participates in and contributes to beginning teacher professional learning that is aligned with professional teaching standards, school and district instructional goals, and promotes development of optimal learning environments and rigorous content learning for every student.
- 4.24(2) Deepens and maintains own expertise around the practices that maximize student achievement including deep content knowledge, social and emotional learning, learner variability, culturally responsive pedagogy, and professional ethics.
- 4.24(2)(a) Deepens and maintains own knowledge of Colorado Academic Standards and evidence outcomes, lessons, and curriculum to ensure that every student has instruction that supports maximum achievement.
- 4.24(2)(b) Deepens and maintains own knowledge of research-based practices that create emotionally, intellectually, and physically safe classroom environments for every student.
- 4.24(2)(c) Engages in district and school-offered professional learning opportunities to deepen and maintain knowledge of strategies and research-based frameworks designed to support the beginning teacher to expect, plan for, and meet the variable learning needs of every student.
- 4.24(2)(d) Deepens and maintains own knowledge of best practices for coaching the beginning teacher in the use of equity principles and culturally responsive pedagogy to identify and address inequitable practices and reflecting on their own practice through an equity lens.

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- 4.24(3) Creates and maintains collaborative, respectful, instructionally focused mentoring partnerships to foster beginning teacher ownership of continuous improvement of practice and advance the learning of every student.
- 4.24(3)(a) Cultivates relational trust, caring, mutual respect, and honesty with the beginning teacher to build ownership, solve problems, and foster beginning teacher agency, resilience, and commitment to the success of every student.
- 4.24(3)(b) Uses purposeful language and instructionally focused tools and protocols to efficiently and effectively engage the beginning teacher in collaborative, instructionally focused, problem-solving conversations and reflective analysis to promote beginning teacher agency and improved student academic, social, and emotional growth.
- 4.24(3)(c) Creates strategic, flexible, and individualized mentoring outcomes and plans for meetings with the beginning teacher to address the needs of diverse beginning teacher contexts and advance beginning teacher practice and the learning of every student.
- 4.24(3)(d) Facilitates reflective conversations about race, culture, and the diversity of the school and community to improve instruction and ensure that every student has what they need to be successful academically, socially, and emotionally.
- 4.24(3)(e) Utilizes reflective conversations to build the beginning teacher's capacity to create effective partnerships with families and local communities to improve instruction and learning for students of all backgrounds.
- 4.24(4) Builds beginning teacher capacity to advance equitable learning by providing rigorous, standards-aligned instruction that meets the needs of every student.
- 4.24(4)(a) Advances standards-aligned instruction and student learning of rigorous content by engaging the beginning teacher in ongoing, data-driven teaching-coaching cycles to advance equitable learning for every student.
- 4.24(4)(b) Builds beginning teacher capacity to advance the learning of every student through use of appropriate assessments of student academic, social, and emotional skills.
- 4.24(4)(c) Builds beginning teacher capacity to analyze student learning data to guide the planning and delivery of standards-aligned instruction that meets the variable learning needs of every student.
- 4.24(4)(d) Builds beginning teacher capacity for continuous improvement through meaningful, ongoing, and actionable feedback that is aligned to the professional growth plan that will be used to inform the beginning teacher's annual evaluation.
- 4.24(5) Builds beginning teacher capacity to advance equitable and inclusive learning by providing an environment that is culturally responsive and meets the diverse academic, social, and emotional needs of every student.
- 4.24(5)(a) Engages beginning teacher in developing and applying research-based knowledge, skills, and strategies to create emotionally, intellectually, and physically safe learning environments for every student.
- 4.24(5)(b) Builds beginning teacher capacity to advance equitable and inclusive instruction for every student based on applying principles of equity, culturally responsive pedagogy, and professional ethics.

4.24(5)(c) Builds beginning teacher capacity to establish and maintain an inclusive classroom environment that fosters self-regulation and learner agency.

4.24(5)(d) Builds beginning teacher capacity to equitably meet the diverse learning needs of every student through the instructional use of technology, including the ability to adapt to contexts in which access to technology is limited.

5.00 Special Education (Ages 5-21) and Gifted Education (Ages 4-21) Endorsements

5.01 Special Education Generalist (Ages 5-21)

To hold an endorsement as a special education generalist, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed [the coursework and assessments for](#) an approved program for the preparation of special education including prescribed field experience and student teaching; have demonstrated the foundational knowledge and competencies found in 4.02(5) – 4.02(16) of these rules; and have demonstrated the additional competencies specified below:

5.01(1) **Learner development and individual learning differences:** Beginning special education professionals are able to articulate their personal philosophy of special education and understand how exceptionalities may interact with development and learning and use this knowledge to provide meaningful and challenging learning experiences for individuals with exceptionalities; and

5.01(1)(a) understand how language, culture and family background influence the learning of individuals with exceptionalities;

5.01(1)(b) use understanding of development and individual differences to respond to the needs of individuals with exceptionalities and;

5.01(1)(c) are knowledgeable of:

5.01(1)(c)(i) typical and atypical human growth and development;

5.01(1)(c)(ii) similarities, differences and characteristics among individuals with exceptionalities and their typically developing peers, as well as the educational implications of various exceptionalities;

5.01(1)(c)(iii) educational implications of characteristics of various exceptionalities;

5.01(1)(c)(iv) family systems and the role of families in supporting development.

5.01(1)(c)(v) cultural perspectives influencing the relationships among families, schools and communities as related to instruction;

5.01(1)(c)(vi) variations in beliefs, traditions and values across and within cultures and their effects on relationships among individuals with exceptionalities, family and the educational process;

5.01(1)(c)(vii) characteristics and influences of the cultural and environmental milieu of the individual with exceptionalities and the family;

5.01(1)(c)(viii) similarities and differences of individuals with and without exceptionalities;

5.01(1)(c)(ix) valid and reliable resources and/or strategies to learn the possible effects of various medications on individuals with exceptionalities;

5.01(1)(c)(x) effects of growth and development on academic, social and behavioral milestones;

5.01(1)(c)(xi) impact of learners' academic and social abilities, attitudes, interests and values on instruction and career development;

5.01(1)(c)(xii) unique ways of learning practiced by individuals with exceptionalities, including those from culturally and/or linguistically diverse backgrounds and strategies for addressing these differences; and

5.01(1)(c)(xiii) expected ways of behaving and communicating among cultures related to developmental milestones that can lead to misinterpretation and misunderstanding;

5.01(1)(d) demonstrate skills to apply consistent and fair disciplinary practices in the classroom and demonstrate the ability to:

5.01(1)(d)(i) maintain adequate and appropriate data regarding student behavior to determine whether student actions are a manifestation of a disability and/or to address such implication(s) in the expulsion process;

5.01(1)(d)(ii) collect and use student achievement data and incorporate it in the development of individualized education programs (IEPs);

5.01(1)(d)(iii) establish measurable goals, objectives and adaptations based on student need;

5.01(1)(d)(iv) assess and report progress regarding student attainment of annual goals and objectives; and

5.01(1)(d)(v) modify student plans in a timely way based on student data.

5.01(2) **Learning environments:** Beginning special education professionals create safe, inclusive, culturally responsive learning environments so that individuals with exceptionalities become active and effective learners and develop emotional well-being, positive social interactions and self-determination and:

5.01(2)(a) collaborate with general education and other educational team members to engage individuals with exceptionalities in meaningful learning activities and social interactions within the least restrictive environment for each student and promote meaningful inclusion;

5.01(2)(b) use effective, accessible and age-respectful instructional interventions to teach individuals with exceptionalities how to adapt to different environments;

5.01(2)(c) intervene safely and appropriately with individuals with exceptionalities in crisis; and

5.01(2)(d) are knowledgeable of:

5.01(2)(d)(i) the demands of a variety of learning environments;

5.01(2)(d)(ii) basic classroom management theories and strategies for individuals with exceptionalities;

5.01(2)(d)(iii) effective management of teaching and learning in a variety of settings;

- 5.01(2)(d)(iv) verbal and non-verbal adult attitudes and behaviors that influence and/or catalyze the behavior of individuals with exceptionalities;
 - 5.01(2)(d)(v) development and instruction of social skills needed for educational and other environments, such as the workplace, college and the military;
 - 5.01(2)(d)(vi) strategies for crisis prevention and intervention;
 - 5.01(2)(d)(vii) strategies for preparing individuals to live productively in a culturally diverse world;
 - 5.01(2)(d)(viii) ways to create learning environments that allow individuals to retain and appreciate their own and each other's respective language and cultural heritage;
 - 5.01(2)(d)(ix) ways cultures are negatively stereotyped, as well as implicit and explicit biases that may impact student behavior; and
 - 5.01(2)(d)(x) strategies used by diverse populations to cope with a legacy of former and continuing racism, as well as the implications and impacts of systemic biases on educational outcomes.
- 5.01(2)(e) Beginning special education professionals demonstrate the skills to:
- 5.01(2)(e)(i) create a safe, equitable, positive and supportive learning environment in which diversities are valued;
 - 5.01(2)(e)(ii) identify appropriately ambitious and age-respectful expectations for personal and social behavior in various settings;
 - 5.01(2)(e)(iii) identify supports needed for safe and effective inclusion, access and participation in various program placements;
 - 5.01(2)(e)(iv) design learning environments that encourage active participation in individual and group activities;
 - 5.01(2)(e)(v) adapt, as appropriate, the learning environment to promote expected prosocial behaviors;
 - 5.01(2)(e)(vi) use performance data and information from all involved parties to make or suggest adaptations in learning environments;
 - 5.01(2)(e)(vii) establish and maintain rapport with individuals with and without exceptionalities;
 - 5.01(2)(e)(viii) teach developmentally appropriate, age-respectful self-advocacy;
 - 5.01(2)(e)(ix) create an environment that encourages developmentally appropriate, age-respectful self-advocacy and increased independence, characterized by appropriate student behavior, efficient use of time and disciplined student acquisition of knowledge, skills and application thereof through:
 - 5.01(2)(e)(ix)(A) the provision of a safe, productive learning environment that is responsive to the physical, social, cognitive, academic, linguistic, cultural and functional needs of student learners;

5.01(2)(e)(ix)(B) evaluation to determine specific learner affective needs and to match student strengths with appropriate curriculum and instructional delivery strategies in an environment organized to encourage optimal learning

5.01(2)(3)(ix)(C) matching classroom management and organizational techniques to the needs of groups of students; and

5.01(2)(e)(ix)(D) effective communication and collaboration with families to link school services and supports to home that focus on addressing cultural, socio-economic and linguistic diversity issues and other life-affecting conditions spanning kindergarten through transition-related learning needs;

5.01(2)(e)(x) use effective and varied behavior management strategies that are positively stated, developmentally appropriate, age-respectful and aligned with student need and that address the function of the behavior;

5.01(2)(e)(xi) use the least intensive behavior intervention strategy consistent with the needs of the individual with exceptionalities;

5.01(2)(e)(xii) design and managing daily routines;

5.01(2)(e)(xiii) organize, develop and sustain learning environments that support positive intra- and intercultural experiences;

5.01(2)(e)(xiv) mediate controversial intercultural issues among individuals with exceptionalities within the learning environment in ways that enhance any culture, group or person;

5.01(2)(e)(xv) provide guidance, structure, coaching and support to para-educators, volunteers and tutors and others on the educational team related to instruction, intervention and direct services to ensure that each student's IEP is implemented effectively; and

5.01(2)(e)(xvi) use universal precautions for health and safety.5.01(3) **Curricular content**

knowledge: Beginning special education professionals use knowledge of general and specialized curricula to individualize learning for individuals with exceptionalities. Beginning special education professionals understand the central concepts, structures of the discipline and tools of inquiry of the content areas they teach, and can organize this knowledge, integrate cross-disciplinary skills and develop meaningful learning progressions for individuals with exceptionalities by:

5.01(3)(a) using general and specialized content knowledge for teaching across curricular content areas to individualize learning for individuals with exceptionalities;

5.01(3)(b) identifying and prioritizing areas of the general curriculum and accommodations for individuals with exceptionalities;

5.01(3)(c) providing accommodations and/or modifications to general and specialized curricula to make them accessible to individuals with exceptionalities; and

5.01(3)(d) integrating affective, social and life skills with academic curricula.

5.01(3)(e) Beginning special education professionals are aware of the scope and sequences of general and special curricula and are knowledgeable of:

5.01(3)(e)(i) theories and research that form the basis of curriculum development and instructional practice;

5.01(3)(e)(ii) national, state and local curricula standards; and

5.01(3)(e)(iii) technology for planning and managing the teaching and learning environment.

5.01(3)(f) Beginning special education professionals are knowledgeable about:

5.01(3)(f)(i) reading, writing and communicating instruction and are able to collaborate and consult with content-area teachers in developing students' knowledge and skills in reading and written and oral communication and demonstrate the skills to:

5.01(3)(f)(i)(A) plan and organize reading and writing instruction and interventions informed by a variety of ongoing student assessment and implement methods of intensifying interventions to address challenges in literacy;

5.01(3)(f)(i)(B) use knowledge of typical and atypical language and cognitive development to guide the choice of instructional strategies and interventions in meeting the learning needs of individual students;

5.01(3)(f)(i)(C) develop in students the phonological and linguistic skills related to reading including phonemic awareness, concepts of print, systematic explicit phonics and other word identification strategies to enhance vocabulary development and spelling instruction;

5.01(3)(f)(i)(D) develop reading comprehension skills in students, including comprehension strategies within a variety of genres, literary response and analysis, content area literacy and the promotion of independent reading;

5.01(3)(f)(i)(E) increase oral and written English language arts skills and proficiency of students, including the appropriate and correct use of vocabulary and standard English, punctuation, grammar, sentence structure and spelling, as well as an understanding of the relationships between reading, writing and communicating

5.01(3)(f)(i)(F) design instruction and interventions based on the unique strengths and needs of students with exceptionalities to assist them in their acquisition of reading, writing and communicating skills;

5.01(3)(f)(i)(G) apply a variety of effective evidence-based specialized instructional strategies and curricular approaches to the teaching of reading and writing skills; and

5.01(3)(f)(i)(H) match appropriate instructional strategies to student needs related to the acquisition of knowledge and skills in required content areas, such as reading, writing and communicating;

5.01(3)(f)(ii) mathematics and mathematics instruction and are able to collaborate and consult with content-area teachers in developing students' knowledge and skills in the use of number systems, number sense, geometry, measurement, statistics, probability, mathematical functions and the use of variables; and

5.01(3)(f)(iii) general academic content of and basic concepts related to civics, economics, foreign language, geography, history, science, music, visual arts and physical education in order to collaborate with the general classroom teacher to provide the adaptations necessary for students to access and learn the content area.

5.01(3)(g) Beginning special education professionals are able to:

5.01(3)(g)(i) incorporate effective evidence-based strategies and interventions into collaborative roles with other professionals as related to planning for instructional delivery;

5.01(3)(g)(ii) consult and form evaluation teams with other school professionals, families and students to support learners in gaining required access to content aligned with individuals needs outlined in the IEP so that they may achieve the Colorado Academic Standards; and

5.01(3)(g)(iii) ensure instruction is consistent with state academic standards, and school and district priorities and requirements.

5.01(4) **Assessment:** Beginning special education professionals are knowledgeable about basic terms used in assessment, the use of technology in data-driven assessment, the multiple methods of assessment and data-sources used in making educational decisions, and the legal provisions and ethical principles regarding the assessment of individuals, and demonstrate skills to;

5.01(4)(a) develop individualized assessment strategies, utilize a wide variety of progress monitoring tools and select and use technically sound non-biased formal and informal assessments

5.01(4)(b) use measurement principles and practices to interpret assessment results and guide educational decisions for individuals with exceptionalities;

5.01(4)(c) collaborate with colleagues and families to use multiple types of assessment information in making decisions about and/or adapting instruction for individuals with exceptionalities;

5.01(4)(d) assess and evaluate the effects that a wide variety of teaching strategies and interventions have on student performance through an examination of student performance and assessment data;

5.01(4)(e) use functional assessment data to design and implement positive behavioral and intervention support systems collaboration with educational team members;

5.01(4)(f) use assessment information in making eligibility, program and placement decisions for individuals with exceptionalities, including those for culturally and/or linguistically diverse backgrounds;

5.01(4)(g) provide assessment results to all interested parties and specific and timely verbal feedback to students to guide and improve their academic performance related to academic standards; and

5.01(4)(h) prepare students for required state assessments and for any other formal and informal assessments of academic achievement.

5.01(5) **Instructional planning and strategies:** Beginning special education professionals select, adapt and use a repertoire of evidence-based instructional strategies to advance learning of individuals with exceptionalities and demonstrate skills to:

- 5.01(5)(a) consider an individual's abilities, interests, learning environments and cultural and linguistic factors in the selection, development and adaptation of instruction and learning experiences for individuals with exceptionalities;
- 5.01(5)(b) use technologies to support instructional assessment, planning and delivery for individuals with exceptionalities;
- 5.01(5)(c) incorporate validated evidence-based practices for specific characteristics of learners and settings to design short- and long-range instruction and intervention plans aligned to the Colorado Academic Standards;
- 5.01(5)(d) support students with exceptionalities via augmentative and alternative communication systems and current and assistive technologies for receptive and expressive communication and to meet students' instructional needs; ;
- 5.01(5)(e) use strategies to enhance language development and communication skills of individuals with exceptionalities;
- 5.01(5)(f) develop and implement a variety of education and transition plans for individuals with exceptionalities across a wide range of settings and different learning experiences in collaboration with individuals, families and teams;
- 5.01(5)(g) teach to mastery and promote cross-disciplinary knowledge and skills such as critical-thinking and problem-solving to individuals with exceptionalities.
- 5.01(5)(h) support students in their acquisition of technology skills according to needs, levels of learning and requirements for assistive technology;
- 5.01(5)(i) develop and implement comprehensive, longitudinal individualized programs in collaboration with the educational team:
 - 5.01(5)(i)(i) involving the student and family in setting instructional goals and monitoring progress;
 - 5.01(5)(i)(ii) using task analysis
 - 5.01(5)(i)(iii) sequencing, implementing and evaluating individualized learning objectives;
 - 5.01(5)(i)(iv) developing and selecting instructional content, resources and strategies that respond to cultural, linguistic and gender differences; and
 - 5.01(5)(i)(v) incorporating and implementing instructional and assistive technology into the educational program;
 - 5.01(5)(i)(vi) preparing lesson plans and organizing materials to implement them;
 - 5.01(5)(i)(vii) using instructional time effectively and making responsive adjustments to instruction based on continual observations;
 - 5.01(5)(i)(viii) using procedures to increase the individual's self-awareness, self-management, self-control, self-reliance and self-esteem to prepare individuals to exhibit self-enhancing behavior in response to societal attitudes and actions; and
 - 5.01(5)(i)(ix) implementing strategies to facilitate integration into various settings; including strategies that:

5.01(5)(i)(ix)(A) teach individuals to self-assess, problem-solve and use other cognitive strategies to meet their needs;

5.01(5)(i)(ix)(B) facilitate maintenance and generalization of skills across learning environments;

5.01(5)(i)(ix)(C) promote successful transitions for individuals with exceptionalities; and

5.01(5)(i)(ix)(D) facilitate understanding of subject matter for individuals with exceptionalities whose primary language is not the dominant language.

5.01(6) **Professional learning and ethical practice:** Beginning special education professionals conduct professional activities in compliance with applicable laws and policies, use foundational knowledge of the field and professional ethical principles and practice standards to inform special education practice, are committed to lifelong learning, remaining current in research-validated and evidence-based practices and advancing the profession and demonstrate skills to:

5.01(6)(a) hold high standards of competence and integrity, exercise sound judgment and demonstrate familiarity with ethical principles in the special education field, , high leverage practices and other standards of the profession;

5.01(6)(b) act ethically in advocacy for appropriate and unbiased identification, assessment, instruction and service delivery;

5.01(6)(c) practice within one's skill limitations and obtain assistance as needed;

5.01(6)(d) make ethical decisions with regard to unbiased identification, assessment, instructional and service delivery for students in special education;

5.01(6)(e) conduct self-evaluation of instruction and reflect on one's practice to improve instruction and guide professional growth;.

5.01(6)(f) promote the highest quality-of-life potential of individuals with exceptionalities; and

5.01(6)(g) be sensitive to the culture, language, religion, gender, disability, socio-economic status and sexual orientation of individuals.

5.01(6)(h) Beginning special education professionals understand:

5.01(6)(h)(i) models, theories, philosophies and research methods that form the basis for special education practice;

5.01(6)(h)(ii) laws, policies and ethical principles regarding functional and positive behavior management planning and implementation addressing function of behavior and how to provide unbiased supports;

5.01(6)(h)(iii) the relationship of special education to the organization and the function of educational agencies;

5.01(6)(h)(iv) the rights and responsibilities of individuals with exceptionalities, parents, teachers, other professionals and schools related to exceptionalities;

5.01(6)(h)(v) issues, assurances and due process rights related to assessments, eligibility and placement within a continuum of services;

5.01(6)(h)(vi) issues in definition and identification of individuals with exceptionalities, including those from dual language and culturally and linguistically diverse backgrounds, including:

5.01(6)(h)(vi)(A) how diversity is part of families, cultures and schools and that complex human issues can interact with the delivery of special education services;

5.01(6)(h)(vi)(B) historical points of view and contribution of culturally diverse groups; and

5.01(6)(h)(vi)(C) the impact of the dominant culture on shaping school culture and the importance of providing culturally responsive pedagogy;

5.01(6)(h)(vii) issues, assurances and due-process rights related to assessments, eligibility and placement within a continuum of services;

5.01(6)(h)(viii) family systems and the role of families in the educational process;

5.01(6)(h)(ix) personal cultural biases and differences that affect one's teaching, behaviors, evaluation and collaboration; and

5.01(6)(h)(x) the importance of serving as an intentional model of inclusion for individuals with exceptionalities.

5.01(6)(i) The beginning special education professional is knowledgeable about the relationship of education to democracy, the school's role in teaching and perpetuating a democratic system of government; educational governance; careers in teaching; the relationship(s) between the various government entities that create laws, rules, regulations and policies and special education practices, and is able to:

5.01(6)(i)(i) model and articulate democratic ideals to students and other stakeholders,
by:

5.01(6)(i)(i)(A) teaching about productive citizenship; and

5.01(6)(i)(i)(B) teaching and perpetuating the principles of a democratic republic;

5.01(6)(i)(ii) model for and develop in students positive and accepted behaviors to accepted standards and respect for the rights of others as necessary for successful personal, family and community involvement and well-being;

5.01(6)(i)(iii) demonstrate respect for and effectively address in planning the influences that affect educational practice, including;

5.01(6)(i)(iii)(A) federal and state constitutional provisions;

5.01(6)(i)(iii)(B) federal and state executive, legislative and legal policies;

5.01(6)(i)(iii)(C) the roles of elected officials in policy-making;

5.01(6)(i)(iii)(D) local boards of education, school district and school administration policies and those of boards of cooperative services;

5.01(6)(i)(iii)(E) the influence of nontraditional and nonpublic schools, including charter, private and home schools, and

5.01(6)(i)(iii)(F) public sector input from business, advocacy groups and the public.

5.01(6)(i)(iv) promote teaching as a worthy career and describe the wide variety of career paths in education; and

5.01(6)(i)(v) participate in professional development options that can improve performance and provide professional development or other learning opportunities to colleagues in school buildings related to best practices in special education. .

5.01(7) Collaboration and cultural responsiveness: Beginning special education professionals understand the theory and elements of effective collaboration and serve as a collaborative resource to families, other educators, related service providers, individuals with exceptionalities and personnel from community agencies in culturally responsive ways to address the needs of individuals with exceptionalities across a range of learning experiences and demonstrate knowledge of:

5.01(7)(a) promoting the well-being of individuals with exceptionalities across a wide range of settings and collaborators.

5.01(7)(b) models and strategies of consultation and collaboration;

5.01(7)(c) the roles of individuals with exceptionalities, families and school and community personnel in planning of an IEP;

5.01(7)(d) concerns of families of individuals with exceptionalities and strategies to help address these concerns; and

5.01(7)(e) culturally responsive factors that promote effective communication and collaboration with individuals with exceptionalities, families, school personnel and community members.

5.01(7)(f) Beginning special education professionals demonstrate the skills to:

5.01(7)(f)(i) maintain confidential communication about individuals with exceptionalities;

5.01(7)(f)(ii) collaborate with families and others in assessment of individuals with exceptionalities;

5.01(7)(f)(iii) foster respectful and beneficial relationships between families and professionals;

5.01(7)(f)(iv) assist individuals with exceptionalities and their families in becoming active participants in the educational team;

5.01(7)(f)(v) plan and conduct collaborative conferences with individuals with exceptionalities and their families;

5.01(7)(f)(vi) collaborate with school personnel and community members in integrating individuals with exceptionalities into various settings;

5.01(7)(f)(vii) use group problem-solving skills to develop, implement and evaluate collaborative activities;

- 5.01(7)(f)(viii) model techniques and provide professional development and coaching to others in the use of instructional methods and accommodations;
- 5.01(7)(f)(ix) communicate with school personnel about the characteristics and needs of individuals with exceptionalities;
- 5.01(7)(f)(x) communicate effectively with families of individuals with exceptionalities from diverse backgrounds;
- 5.01(7)(f)(xi) assist content-area teachers in adapting curriculum, instruction and strategies utilizing evidence-based practices and technology to support students with exceptionalities in meeting Colorado Academic Standards and extended evidence outcomes;
- 5.01(7)(f)(xii) assist students in education, behavior and transition services or transitions with family, educators, other professional and relevant community representatives; and
- 5.01(7)(f)(xiii) strategize with other professionals when a student's medical condition or medication must be considered in terms of its effect on a student's learning or behavior.

5.02 Early Childhood Special Education (Ages Birth-8)

To be endorsed in early childhood special education, for ages birth-8, an applicant must hold a bachelor's or higher degree from a four-year accepted institution of higher education; have completed an approved program in early childhood special education, that includes student teaching and practicum; have demonstrated the foundational knowledge and skills necessary for working with young children found in 4.01 of these rules; and have demonstrated the additional competencies specified below:

These early childhood special education standards are targeted, intensive and specialized for educators working with children with disabilities and exceptional needs.

5.02(1) Learner development and individual learning differences (builds upon rule 4.01(1)): Beginning early childhood special education professionals understand how exceptionalities may interact with development and learning and use this knowledge to provide meaningful and challenging learning experiences for individuals with exceptionalities.

5.02(1)(a) Beginning early childhood special education professionals demonstrate knowledge of:

- 5.02(1)(a)(i) the impact that different theories and philosophies of early learning and development have on assessment, curriculum, intervention and instruction decisions;
- 5.02(1)(a)(ii) biological and environmental factors that may support or constrain children's early development and learning as they plan and implement early intervention and instruction;
- 5.02(1)(a)(iii) characteristics, etiologies and individual differences within and across the range of abilities, including development delays and disabilities, and their potential impact on children's early development and learning; and

5.02(1)(a)(iv) normative sequences of early development, individual differences and families' social and cultural linguistic diversity to support each child's development and learning across contexts.

5.02 (1)(b) Beginning early childhood special education professionals demonstrate the skills to:

5.02(1)(b)(i) develop and match learning experiences and strategies to characteristics of infants and young children;

5.02(1)(b)(ii) identify systematic, responsive and intentional evidence-based practices and use these practices with fidelity to support young children's learning and development across all developmental and content domains; and

5.02(1)(b)(iii) establish communication systems for young children that support self-advocacy, including the use of assistive technology for young children who are deaf and/or hard of hearing.

5.02(2) Learning environments and instructional planning and strategies (builds upon rule 4.01(4) and 4.01(8)): Beginning early childhood special education professionals create safe, inclusive, culturally responsive learning environments and select, adapt and use a repertoire of evidence-based instructional strategies to advance the learning of individuals with exceptionalities..

5.02(2)(a) Beginning early childhood special education professionals demonstrate the skills to:

5.02(2)(a)(i) engage in ongoing planning and use flexible and embedded instructional and environmental arrangements and appropriate materials to support the use of interactions, interventions and instruction addressing the development and academic content domains, which are adapted to meet the needs of each child and their family;

5.02(2)(a)(ii) use responsive interactions, interventions and instruction with sufficient intensity and types of support across activities, routines and environments to promote child learning and development and facilitate access, participation and engagement in natural environments and inclusive settings;

5.02(2)(a)(iii) plan for, adapt and improve approaches to interactions, interventions and instruction based on multiple sources of data across a range of natural environments and inclusive settings;

5.02(2)(a)(iv) use technologies to support instructional assessment, planning and delivery for individuals with exceptionalities;

5.02(2)(a)(v) identify and create multiple opportunities for young children to develop and learn play skills and engage in meaningful play experiences independently and across contexts;

5.02(2)(a)(vi) promote young children's social and emotional competence and communication and proactively plan and implement function-based interventions to prevent and address challenging behaviors;

5.02(2)(a)(iv) structure,; direct and support the activities of para-educators, volunteers and tutors;

5.02(2)(a)(v) intervene safely and appropriately with individuals with exceptionalities in a crisis; and

5.02(2)(a)(vi) use universal precautions.

5.02(3) Curricular content knowledge (builds upon rule 4.01(8)): Beginning early childhood special education professionals use knowledge of general and specialized curricula to individualize learning for individuals with exceptionalities.

5.09(3)(a) Beginning early childhood special education professionals are knowledgeable of early childhood curriculum frameworks, developmental and academic content knowledge and related pedagogy to plan and ensure equitable access to universally designed, developmentally appropriate and challenging learning experiences in natural and inclusive environments.

5.02(3)(b) Beginning early childhood special education professionals demonstrate the skills to:

5.02(3)(b)(i) collaborate with families and other professionals to identify an evidence-based curriculum addressing developmental and content domains to design and facilitate meaningful and culturally responsive learning experiences that support the unique abilities and needs of all children and families; and

5.02(3)(b)(ii) engage in ongoing reflective practice and access evidence-based information to improve their own practices.

5.02(4) Assessment (builds upon rule 4.01(2)): Beginning early childhood special education professionals use multiple methods of assessment and data-sources in making educational decisions.

5.02(4)(a) Beginning early childhood special education professionals are knowledgeable of the:

5.02(4)(a)(i) purposes of formal and informal assessment, including ethical and legal considerations, and use this information to choose developmentally, culturally and linguistically appropriate, valid, reliable tools and methods that are responsive to characteristics of the young child, family and program;

5.02(4)(a)(ii); process for developing and administering informal assessments and/or selecting and using valid, reliable formal assessments that use evidence-based practices, including technology, in partnership with families and other professionals;

5.02(4)(a)(iii) process for exiting children from special education when appropriate; and

5.02(4)(a)(iv) the data collection for federal reporting requirements (entries and exits to early childhood special education) and the need for collaboration with general education early childhood educators to support this data collection.

5.02(4)(b) Beginning early childhood special education professionals demonstrate the skills to:

5.02(4)(b)(i) analyze, interpret, document and share assessment information using a strength-based approach with families and other professionals; and

5.02(4)(b)(ii) collaborate with families and other team members to use data to determine eligibility, develop child and family-based outcomes and goals, plan for interventions and instruction, and monitor progress to determine efficacy of programming.

5.02(5) Professional learning and ethical practice (builds upon rule 4.01(6)): Beginning early childhood special education professionals use foundational knowledge of the field and their professional ethical principles and practice standards to inform early childhood special education practice, to engage in lifelong learning and to advance the profession.

5.02(5)(a) Beginning early childhood special education professionals are knowledgeable of trends and issues in early childhood education, early childhood special education and early intervention and practice in accordance with ethical and legal policies and procedures.

5.02(5)(b) Beginning early childhood special education professionals demonstrate the skills to:

5.02(5)(b)(i) advocate for improved outcomes for young children, families and the profession, including the promotion and use of evidence-based practices and decision-making;

5.02(5)(b)(ii) recognize signs of emotional distress, neglect and abuse, and follow reporting procedures;

5.02(5)(b)(iii) implement the level of support needed by the family to achieve the desired outcomes for the child;

5.02(5)(b)(iv) fully understand procedural safeguards and ensure families understand them and are part of the decision-making;

5.02(5)(b)(v) implement family services consistent with due process safeguards;

5.02(5)(b)(vi) serve as a model for individuals with exceptionalities;

5.02(5)(b)(vii) conduct professional activities in compliance with applicable laws and policies; and

5.02(5)(b)(viii) engage with the early intervention/early childhood special education profession by participating in local, regional, national and/or international activities and organizations

5.02(6) Collaboration (builds upon rule 4.01(3)): Beginning early childhood special education professionals collaborate with families, other educators, related service providers, individuals with exceptionalities and personnel from community agencies in culturally responsive ways to address the needs of individuals with exceptionalities across a range of learning experiences.

5.02(6)(a) Beginning early childhood special education professionals demonstrate the skills to:

5.02(6)(a)(i) apply teaming models, skills and processes and appropriate uses of technology when collaborating and communicating with families, professionals with varying skills, expertise and roles across multiple disciplines, community partners and agencies;

- 5.02(6)(a)(ii) use a variety of evidence-based, collaborative strategies when working with adults that are culturally and linguistically responsive and appropriate to the task, the environment and service delivery approach;
- 5.02(6)(a)(iii) partner with families and other professionals to develop individualized plans and support the various transitions that occur for the child and their family throughout the birth-8 age span;
- 5.02(6)(a)(iv) apply family-centered practices, family systems theory and knowledge of the changing needs and priorities in families' lives to develop trusting, respectful, affirming and culturally responsive partnerships with all families to allow for the mutual exchange of knowledge and information;
- 5.02(6)(b)(v) engage in reciprocal partnership with families and other professionals to facilitate responsive adult-child interactions, interventions and instruction in support of child learning and development;
- 5.02(6)(b)(vi) engage families in identifying their strengths, priorities and concerns; and
- 5.02(6)(b)(vii) promote families' competence and confidence during assessment, individualized planning, intervention and transition processes to support their goals for their family and young child's development and learning.

5.03 Special Education Specialist: Visually Impaired (Ages Birth-21)

To be endorsed as a special education specialist: visually impaired, an applicant must hold an earned master's or higher degree in special education visual impairment or its equivalent (as determined by the Department) from an accepted institution of higher education; have completed an approved program for the preparation of special education specialists: visually impaired including prescribed field experience requirements; and have demonstrated the competencies specified below:

- 5.03(1) The special education specialist: visually impaired is knowledgeable about the foundations of special education including, but not limited to, the legal framework, historical precedents, auricular foundation and cultural and socio-economic factors affecting students with visual impairment(s) and other disabilities, and is able to:
 - 5.03(1)(a) articulate to a variety of audiences the models, theories, historical foundation and philosophies that provide the bases for special education practice related to learners who are visually impaired.
 - 5.03(1)(b) articulate to a variety of audiences variations in beliefs, traditions and values across cultures and their effect on attitudes toward and expectations for students with visual impairment(s).
 - 5.03(1)(c) identify and gain access to federal entitlements that provide specialized equipment and materials for students with visual impairment(s).
 - 5.03(1)(d) articulate and explain current educational definitions, identification criteria, labeling issues, and incidence and prevalence figures for students with visual impairment(s) and deaf blindness.
- 5.03(2) The special education specialist: visually impaired is knowledgeable about the characteristics of learners, human development and the implications of blindness, visual impairment(s) and deaf blindness upon developmental and academic skills acquisition, and is able to articulate and incorporate into the planning for students relevant information about:

- 5.03(2)(a) the structure, function and normal development of the human visual system.
- 5.03(2)(b) basic terminology, manifestations and educational implications of diseases and disorders of the human visual system.
- 5.03(2)(c) effects of medication(s) on the function(s) of the visual system.
- 5.03(2)(d) the development of other senses when vision is impaired.
- 5.03(2)(e) the effects of visual impairment(s) on early development of motor skills, cognition, social/emotional interaction, self-help, communication and early literacy.
- 5.03(2)(f) similarities and differences between the cognitive, physical, cultural, social, emotional, sensory and literacy needs of students with and without visual impairment(s).
- 5.03(2)(g) differential characteristics of students with visual impairments including levels of severity and the impact of concomitant additional disabilities.
- 5.03(2)(h) the effects of visual impairment(s) on the family and the reciprocal impact on the individual's self-esteem.
- 5.03(2)(i) psychosocial aspects of visual impairment(s).
- 5.03(2)(j) the impact of visual impairment(s) and deaf blindness on formal and incidental learning experiences.
- 5.03(2)(k) psychosocial aspects of visual impairment(s).
- 5.03(3) The special education specialist: visually impaired is knowledgeable about visual disorders and is able to:
 - 5.03(3)(a) explain the characteristics of visual disorders to families and to other educational service providers.
 - 5.03(3)(b) describe the effects of visual impairment(s) – with and without additional disabilities – on development, learning and literacy.
 - 5.03(3)(c) provide information regarding the cognitive, communication, physical, medical, cultural, social, emotional, sensory and literacy needs of students with visual impairment(s) to their families and to educational and related service providers.
 - 5.03(3)(d) recommend adaptations within instructional environments to identify and accommodate individual sensory need(s).
- 5.03(4) The special education specialist: visually impaired is knowledgeable about assessment and evaluation and is able to:
 - 5.03(4)(a) complete accurate assessments of students' developmental and academic performance, apply the information in planning for students and articulate to a variety of audiences regarding:
 - 5.03(4)(a)(i) specialized terminology used in the medical diagnoses and educational assessment(s) of students with visual impairment(s);
 - 5.03(4)(a)(ii) specific assessments that measure functional vision and learning modalities;

- 5.03(4)(a)(iii) ethical considerations, legal provisions, regulations and guidelines related to the valid and relevant assessment of students with visual impairment(s);
 - 5.03(4)(a)(iv) specialized policies and procedures for screening, pre-referral, referral, classification and placement of students with visual impairment(s);
 - 5.03(4)(a)(v) alternative assessment tools and techniques for students with visual impairment(s) including, but not limited to, state- or district-level alternate assessment practices;
 - 5.03(4)(a)(vi) appropriate interpretation and application of assessment scores for students with visual impairment(s) and deaf blindness; and
 - 5.03(4)(a)(vii) the relationship(s) between assessment, individualized family service plan (IFSP) and individualized education plan (IEP) development, and placements, as each affects the educational services provided to students with visual impairment(s).
- 5.03(5) The special education specialist: visually impaired is knowledgeable about and able to evaluate the validity of individual tests for use with students with visual impairment(s) and is able to:
- 5.03(5)(a) use disability-specific assessment instruments.
 - 5.03(5)(b) adapt and implement a variety of assessment procedures in evaluating students with visual impairments and deaf blindness.
 - 5.03(5)(c) interpret eye reports and other information related to the visual impairment(s) including, but not limited to, low-vision evaluation reports to students with visual impairment(s), their families and to other educational and related service providers.
 - 5.03(5)(d) utilize assessment and performance data to develop specific recommendations for modification(s) of and accommodations for the student's learning environment(s) and educational materials.
 - 5.03(5)(e) conduct, interpret and apply the results of formal and informal assessment(s) of functional vision and learning modalities.
 - 5.03(5)(f) create and maintain disability-related records for students with visual impairment(s).
 - 5.03(5)(g) gather background information and family history relevant to the individual student's visual status and instructional needs.
 - 5.03(5)(h) incorporate assessment information into the development of IFSPs and IEPs.
 - 5.03(5)(i) utilize assessment information to develop literacy modality plans for students with visual impairment(s).
- 5.03(6) The special education specialist: visually impaired is knowledgeable about instructional content and practice, specialized instructional strategies and appropriate accommodation(s), and is able to demonstrate these strategies and/or teach learners with visual impairment(s):
- 5.03(6)(a) the use of the abacus, slate and stylus, Braille writer, electronic note taker(s), talking calculator, tactile graphics, computers and other types of access and adaptive technology.

- 5.03(6)(b) basic concepts related to content standards.
- 5.03(6)(c) increasing visual access to and within learning environments related to instruction, the use of print adaptations and optical and non-optical devices.
- 5.03(6)(d) increasing non-visual access to learning environments.
- 5.03(6)(e) alternative reasoning and decision-making skills.
- 5.03(6)(f) organization and study skills.
- 5.03(6)(g) structured pre-cane orientation and mobility assessment and instruction.
- 5.03(6)(h) tactual perceptual skills.
- 5.03(6)(i) health and health issues.
- 5.03(6)(j) adapted physical and recreational skills.
- 5.03(6)(k) social and daily living skills.
- 5.03(6)(l) developing career awareness and providing them with vocational counseling.
- 5.03(6)(m) promoting self-advocacy.
- 5.03(6)(n) identifying sources of and acquiring specialized instructional and other relevant materials.
- 5.03(6)(o) identifying techniques for the adaptation of instructional methods and materials.
- 5.03(7) The special education specialist: visually impaired is knowledgeable about planning for the instruction of students with visual impairment(s) and is able to:
 - 5.03(7)(a) develop comprehensive short- and long-range individualized learning programs for students with visual impairment(s) and deaf blindness.
 - 5.03(7)(b) prepare appropriate individual and group lesson plans.
 - 5.03(7)(c) involve the student with visual impairment(s) in setting instructional goals and charting progress.
 - 5.03(7)(d) select, adapt and utilize instructional strategies and materials appropriate to the learning needs of the student with visual impairment(s).
 - 5.03(7)(e) use strategies to help students learn, maintain new skills and be able to generalize those skills across other learning environments.
 - 5.03(7)(f) choose and implement instructional techniques that promote successful transitions for students with visual impairment(s).
 - 5.03(7)(g) evaluate and modify instruction according to student need.
 - 5.03(7)(h) interpret and use multiple sources of assessment data in planning for the instruction of students with visual impairment(s) and deaf blindness.

- 5.03(7)(i) choose and use appropriate forms of technology to accomplish instructional objectives for students with visual impairment(s) and integrate technology into the instructional process.
- 5.03(7)(j) sequence, implement and evaluate learning objectives based on standards-based education and the expanded core curriculum for students with visual impairment(s).
- 5.03(7)(k) teach students with visual impairment(s) to think, solve problems and utilize other cognitive strategies to meet individual learning needs.
- 5.03(8) The special education specialist: visually impaired is knowledgeable about effective planning for and management of the teaching and learning environment to provide a setting conducive to group and individualized learning, and is able to:
 - 5.03(8)(a) transcribe, proofread and interline materials in contracted literary, Nemeth and foreign language Braille codes.
 - 5.03(8)(b) utilize specialized equipment and software, such as Braille writers, slate and stylus, computerized Braille transcription and tactile image enhancers, to prepare adapted or modified materials in Braille, accessible print, tactile and other formats appropriate to the assessed needs of students with visual impairment(s).
 - 5.03(8)(c) obtain and organize materials intended to implement instructional objectives for students with visual impairment(s).
 - 5.03(8)(d) design multisensory learning environments that engage the active participation of students with visual impairment(s) in group and individual activities.
 - 5.03(8)(e) design and implement strategies and techniques that facilitate the inclusion of students with visual impairment(s) into a wide variety of educational and community settings.
 - 5.03(8)(f) direct the activities of a classroom paraprofessional, volunteer, peer tutor or Braille transcriber.
 - 5.03(8)(g) create learning environments that encourage self-advocacy and independence for students with visual impairment(s).
- 5.03(9) The special education specialist: visually impaired is knowledgeable about promoting appropriate student behavior and social interaction skills and demonstrates:
 - 5.03(9)(a) effective learning environment management which engenders positive behavior(s) between and among students, such as, but not limited to, strategies that:
 - 5.03(9)(a)(i) identify ways to address attitudes and behaviors that can positively or negatively influence the deportment and achievement of students with visual impairments;
 - 5.03(9)(a)(ii) effectively instruct students in the development of the social skills needed across educational and living environments;
 - 5.03(9)(a)(iii) identify strategies for preparing students with visual impairment(s) to live harmoniously and productively in a diverse world; and
 - 5.03(9)(a)(iv) identify and address inappropriate behaviors attributable to or caused by visual impairment(s).

5.03(10) The special education specialist: visually impaired is knowledgeable about and able to manage student behavior(s) and learning through:

5.03(10)(a) the modification of the learning environment including, but not limited to, schedule, physical arrangement and/or materials.

5.03(10)(b) the selection, implementation and evaluation of appropriate and applicable classroom management strategies for students with visual impairment(s).

5.03(10)(c) the incorporation of social skills training into the curriculum.

5.03(10)(d) utilization of procedures intended to increase student self-awareness, self-control, self-reliance and self-esteem.

5.03(10)(e) preparing students with visual impairment(s) to present themselves in a socially appropriate manner, providing information about, but not limited to, that related to grooming, dress and interpersonal skills.

5.03(10)(f) preparing students to adapt to progressive eye conditions when necessary.

5.03(10)(g) preparing students with visual impairment(s) to appropriately and effectively utilize the services of support personnel.

5.03(10)(h) preparing students with visual impairment(s) to gain access to information about services provided in and for the community.

5.03(10)(i) preparing students with visual impairment(s) to act appropriately in social situations.

5.03(10)(j) preparing students with visual impairment(s) to respond to societal attitudes and actions with positive behavior(s) and self-advocacy.

5.03(11) The special education specialist: visually impaired is knowledgeable about communication and collaborative partnerships and demonstrates:

5.03(11)(a) effective communication and the ability to collaborate with students, their families, and school and community personnel in identifying and addressing:

5.03(11)(a)(i) typical and/or specific concerns of parents of students with visual impairment(s) and appropriate strategies to assist them in resolving concerns;

5.03(11)(a)(ii) roles of students with visual impairment(s), parents, educational service providers and community personnel in planning individualized programs for students;

5.03(11)(a)(iii) strategies for assisting families and other team members in planning appropriate transitions for students with visual impairment(s);

5.03(11)(a)(iv) unique services, networks and organizations that serve as resources to/for students with visual impairment(s);

5.03(11)(a)(v) roles of paraprofessionals or para-educators who work directly with students with visual impairment(s) and deaf blindness; and

5.03(11)(a)(vi) the necessity for role models for students with visual impairment(s).

- 5.03(12) The special education specialist: visually impaired demonstrates the ability to collaborate with others and is able to:
- 5.03(12)(a) identify and implement strategies for working with students with disabilities, parents, and school and community persons, in a wide variety of learning and learning- related environments.
 - 5.03(12)(b) communicate and consult with students, parents, education service providers and community personnel.
 - 5.03(12)(c) foster respectful and beneficial relationships between and among families and professionals.
 - 5.03(12)(d) encourage and assist families in becoming active participants in the education of their own children.
 - 5.03(12)(e) plan and conduct conferences with families or primary caregivers as required and/or necessary.
 - 5.03(12)(f) collaborate with general education teachers and other school and community personnel regarding the integration of students with disabilities into the general learning environment.
 - 5.03(12)(g) communicate with general education teachers, administrators and other school personnel about the characteristics and needs of students with disabilities.
 - 5.03(12)(h) assist families and other team members in understanding the impact of visual impairment(s) and deaf blindness on learning and experience.
 - 5.03(12)(i) report results of specialized assessments to students with visual impairment(s), their families and pertinent team members in relevant and appropriate ways.
 - 5.03(12)(j) manage and direct the activities of para-educators or peer tutors who work with students with visual impairment(s).
- 5.03(13) The special education specialist: visually impaired is knowledgeable about professionalism and ethical practices and demonstrates:
- 5.03(13)(a) appropriate professional practices in contributing to the field of education and to the academic achievement of each individual student including, but not limited to:
 - 5.03(13)(a)(i) decision-making based on the ethical considerations governing the profession of special education, especially as related to the field of the education of the visually impaired learner;
 - 5.03(13)(a)(ii) recognizing cultural bias and how it can affect teaching;
 - 5.03(13)(a)(iii) serving as a role model for students with visual impairment(s);
 - 5.03(13)(a)(iv) participation in consumer and professional organizations and remaining up-to-date with publications and journals relevant to the field of visual impairments; and
 - 5.03(13)(a)(v) the ability to research information related to the learning needs of and outcomes for students with visual impairment(s).

5.03(14) The special education specialist: visually impaired functions in a professional manner by:

- 5.03(14)(a) demonstrating professional ethics.
- 5.03(14)(b) accepting the personal characteristic(s) of students with and without visual impairment(s).
- 5.03(14)(c) remaining up-to-date on literature related to students with visual impairment(s).
- 5.03(14)(d) participating in professional organizations representing the field of visual impairment(s), as appropriate.
- 5.03(14)(e) engaging in professional-growth activities which may benefit students with visual impairment(s), their families and/or colleagues.
- 5.03(14)(f) practicing self-assessment related to instruction, and seeking professional development activities which support the advancement of personal skills and knowledge.

5.04 Special Education Specialist: Deaf/Hard-of-Hearing (Ages Birth-21)

To be endorsed as a special education specialist: deaf/hard-of-hearing, an applicant must hold an earned master's or higher degree in special education: deaf/hard-of-hearing or its equivalent – as determined by the Department of Education – from an accepted institution of higher education; have completed an approved program for the preparation of special education specialists: deaf/hard of hearing including prescribed field experience requirements; and have demonstrated the competencies specified below:

5.04(1) The special education specialist: deaf/hard-of-hearing is knowledgeable about the philosophical, historical and legal foundations of special education and is able to articulate and incorporate into planning for students:

- 5.04(1)(a) current definitions of students with hearing loss including terminology, identification criteria, labeling issues and current incidence and prevalence figures.
- 5.04(1)(b) models, theories and appropriate philosophies that provide the basis for educational practice relevant to students who are deaf or hard-of-hearing.
- 5.04(1)(c) variations in beliefs, traditions and values across cultures and within society, and the effect of the relationships between children who are deaf or hard-of-hearing, their families, schools and communities, and can:
 - 5.04(1)(c)(i) identify resources, model programs, organizations, agencies, research centers and technology that can be of assistance in working with students who are deaf or hard-of-hearing;
 - 5.04(1)(c)(ii) apply understanding of proven theory, of philosophy and of models of effective practice to the education of students who are deaf or hard-of-hearing; and
 - 5.04(1)(c)(iii) articulate the pros and cons of current issues and trends in special education and in educating students who are deaf or hard-of-hearing.

5.04(2) The special education specialist: deaf/hard-of-hearing is knowledgeable about factors that impact the learning of students who are deaf or hard-of-hearing and is able to articulate and incorporate into planning for these students:

- 5.04(2)(a) relevant elements of learning necessary for enhancement of cognitive, emotional and social development.
- 5.04(2)(b) proven and effective research on communication, socialization and cognition.
- 5.04(2)(c) cultural dimensions of being deaf or hard-of-hearing.
- 5.04(2)(d) the specific impact of various etiologies of hearing loss on the sensory, motor and/or learning capability.
- 5.04(2)(e) knowledge of the effect of family involvement, onset of hearing loss, age of identification, amplification and provision of services.
- 5.04(2)(f) knowledge of the impact of early and ongoing comprehensible communication.
- 5.04(2)(g) the effect of sensory input, including both incidental communication and experiences, on the development of language and cognition.
- 5.04(3) The special education specialist: deaf/hard-of-hearing is knowledgeable about and is able to:
 - 5.04(3)(a) demonstrate effective communication strategies to students who are deaf or hard-of-hearing.
 - 5.04(3)(b) describe how to make incidental learning opportunities accessible.
 - 5.04(3)(c) articulate the interrelationship between communication, socialization and cognition.
- 5.04(4) The special education specialist: deaf/hard-of-hearing is knowledgeable about the assessment, effective teaching, service and special services provision and the evaluation of students who are deaf or hard-of-hearing, and is able to:
 - 5.04(4)(a) implement formal and informal assessment procedures for eligibility, placement and program planning.
 - 5.04(4)(b) articulate legal provisions, regulations and guidelines regarding unbiased diagnostic assessment(s) and the use of instructional assessment measures.
 - 5.04(4)(c) incorporate into planning the specifics of policies regarding referral and placement procedures.
 - 5.04(4)(d) demonstrate amplification system's parts and articulate function, benefits and limitations of options in group and personal amplification.
 - 5.04(4)(e) administer assessment procedures and instruments for students who are deaf or hard-of-hearing and those with additional disabilities, and utilize appropriate assessment tools and informal assessment and evaluation procedures, utilizing natural/heritage/preferred language.
 - 5.04(4)(f) use assessment data in making informed instructional decisions and for planning individual programs that result in appropriate service delivery and intervention for students who are deaf or hard-of-hearing.
 - 5.04(4)(g) troubleshoot amplification problems and explain the parts and functions of group and personal amplification.

- 5.04(4)(h) develop and implement effective communication plans.
- 5.04(4)(i) plan an educational program to address the needs of students who are deaf or hard-of-hearing and who may have additional disabilities or conditions that impact learning.
- 5.04(5) The special education specialist: deaf/hard-of-hearing is knowledgeable about content standards and practice and is able to:
 - 5.04(5)(a) identify and utilize specialized instructional materials relevant to specific student need and content standards.
 - 5.04(5)(b) incorporate into planning information related but not limited to the syntactic, semantic use of American Sign Language (ASL) and English.
 - 5.04(5)(c) incorporate into planning information related to languages and systems used to communicate with individuals who are deaf or hard-of-hearing.
 - 5.04(5)(d) articulate normal speech development and characteristics of speech development for deaf or hard-of-hearing students.
 - 5.04(5)(e) implement assessment procedures and curricula designed for:
 - 5.04(5)(e)(i) the speech development of students who are deaf or hard-of-hearing and those who may have additional disabilities;
 - 5.04(5)(e)(ii) ASL and English language development;
 - 5.04(5)(e)(iii) stimulating the utilization of residual hearing;
 - 5.04(5)(e)(iv) strategies/techniques related to the promotion of reading development; and
 - 5.04(5)(e)(v) written language development.
 - 5.04(5)(f) design and implement strategies and techniques for positively affecting the speech development of students who are deaf or hard-of-hearing.
 - 5.04(5)(g) design and implement strategies/techniques to effectively instruct students about ASL and English language development.
 - 5.04(5)(h) design and implement strategies/techniques for the stimulation and utilization of residual hearing.
 - 5.04(5)(i) address in planning ways to facilitate cultural identity, linguistic, academic, cognitive, physical and social-emotional development.
 - 5.04(5)(j) plan effective multi-level lessons.
 - 5.04(5)(k) incorporate proven and effective research-supported instructional strategies and practices.
 - 5.04(5)(l) implement strategies and procedures that effectively facilitate the deaf or hard-of-hearing student's transition to new settings and to meeting life challenges.
 - 5.04(5)(m) communicate with advanced proficiency in relevant language(s) (English, ASL) and/or sign systems.

- 5.04(5)(n) select, modify, design, produce and utilize specialized and appropriate media, instructional materials, resources and technology.
- 5.04(5)(o) infuse communication skills into academic areas.
- 5.04(5)(p) apply appropriate and effective first- and second-language teaching strategies to meet student need.
- 5.04(5)(q) promote and encourage speech development; ASL and English language development; the utilization of residual hearing; reading and written language development to students who are deaf or hard-of-hearing.
- 5.04(5)(r) implement multi-level lessons for students who are deaf or hard-of-hearing.
- 5.04(5)(s) develop effective transition plan for students who are deaf or hard-of-hearing.
- 5.04(6) The special education specialist: deaf/hard-of-hearing is knowledgeable about the learning environment and is able to:
 - 5.04(6)(a) demonstrate the adaptations needed within a variety of learning environments and within the community for students who are deaf or hard-of-hearing.
 - 5.04(6)(b) manage assistive devices appropriate for students who are deaf or hard-of-hearing.
 - 5.04(6)(c) select, implement and evaluate effective classroom management strategies.
 - 5.04(6)(d) adapt learning environments to effectively meet needs of students who are deaf or hard-of-hearing and those who may have additional disabilities or special needs.
 - 5.04(6)(e) plan and effectively implement instruction for students who are deaf or hard-of-hearing and those with additional disabilities or special needs.
- 5.04(7) The special education specialist: deaf/hard-of-hearing is knowledgeable about promoting student social interaction and independence and is able to:
 - 5.04(7)(a) demonstrate processes for establishing ongoing interactions of students who are deaf or hard-of-hearing with peers and role models who are deaf, hard-of-hearing or hearing.
 - 5.04(7)(b) provide opportunities for interaction with communities of individuals who are deaf, hard-of-hearing or hearing on the local, state and national levels.
 - 5.04(7)(c) provide students with a wide variety of communication strategies which allow effective interaction with people and in places, situations and organizations within the community.
 - 5.04(7)(d) implement strategies for teaching appropriate social skills and behavior in a variety of situations to students who are deaf or hard-of-hearing.
 - 5.04(7)(e) provide appropriate methods of effective self-advocacy to students who are deaf or hard-of-hearing.
 - 5.04(7)(f) articulate social/emotional/psychological developmental and social/emotional issues related to students who are deaf or hard-of-hearing.
 - 5.04(7)(g) promote independence and responsibility to students who are deaf or hard-of-hearing.

5.04(7)(h) effectively teach students who are deaf or hard-of-hearing:

5.04(7)(h)(i) how to use support personnel and contact resources appropriately and effectively;

5.04(7)(h)(ii) how to be self-advocates;

5.04(7)(h)(iii) how to be independent and take responsibility for their own actions;

5.04(7)(h)(iv) about legal procedures, their rights and how to take appropriate action;

5.04(7)(h)(v) to express emotions appropriately; and

5.04(7)(h)(vi) how to use a wide variety of assistive devices.

5.04(8) The special education specialist: deaf/hard-of-hearing is knowledgeable about communication and collaborative partnerships and is able to:

5.04(8)(a) provide a wide variety of resources to family members and professionals who are deaf or hard-of-hearing; to assist them in dealing with educational concerns and options, utilizing relevant available services and determining appropriate communication modes; and to identify cultural and community opportunities for students who are deaf or hard-of-hearing.

5.04(8)(b) identify and articulate appropriate roles and responsibilities of educators and support personnel including, but not limited to, interpreters, note-takers and paraprofessionals in the delivery of education and education-related activities and programs to students who are deaf or hard-of-hearing.

5.04(8)(c) articulate the effects of communication on the development of family relationships and strategies to facilitate communication in families with children who are deaf or hard-of-hearing.

5.04(8)(d) articulate appropriate strategies to promote partnerships and to overcome barriers between families and professionals to effectively meet the needs of students who are deaf or hard-of-hearing.

5.04(8)(e) articulate to families and professionals the educational options, communication modes/philosophies, services, cultural issues and community resources available for children who are deaf or hard-of-hearing.

5.04(8)(f) facilitate communication between the child who is deaf and his or her family and/or other caregivers when, and as, appropriate.

5.04(8)(g) facilitate/oversee coordination of and supervise support personnel including but not limited to interpreters, note-takers and paraprofessionals, to meet the needs of students who are deaf or hard-of-hearing.

5.04(8)(h) use collaborative strategies and effective communication skills with individuals who are deaf or hard-of-hearing, parents, school and community personnel in various learning environments.

5.04(8)(i) advocate for meeting the social-emotional, educational and communication needs of students who are deaf or hard-of-hearing in a wide variety of settings.

5.04(9) The special education specialist: deaf/hard-of-hearing is knowledgeable about professionalism and ethical practice and is able to:

5.04(9)(a) acquire the additional knowledge and skills necessary to effectively educate students who are deaf or hard-of-hearing and to work successfully with their families, other professionals and interested stakeholders.

5.04(9)(b) participate in relevant professional and other organizations and remain current regarding publications and journals relevant to the field of educating students who are deaf or hard-of-hearing.

5.04(9)(c) self-assess, design and implement an ongoing professional development plan relevant to being an effective educator of students who are deaf and hard-of-hearing.

5.05 Gifted Education Core (Ages 4-21)

To hold the gifted education core endorsement, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; must hold a Colorado initial or professional teacher or special services license; have completed an approved program for the preparation of gifted education educators, including prescribed field experience and student teaching requirements; have passed any required general education content and/or gifted education assessments; and have demonstrated competency in the seven areas specified below:

5.05(1) Learner development and individual learning differences: An educator with a gifted education core endorsement understands variations in learning and development in cognitive and affective areas between and among individuals with gifts and talents and applies this understanding to provide appropriately meaningful and challenging learning experiences for individuals with exceptionalities. This educator understands that learner differences and development are manifest and monitored via data, bodies of evidence, advanced learning plans (ALPs), academic and affective goals, and multi-tiered system of supports systemic intervention strategies and tools for differentiation, acceleration and enrichment that address advanced learning differences and to support optimal continual development of individual growth and potential. The gifted educator applies knowledge of:

5.56(1)(a) gifted learner development in order to:

5.05(1)(a)(i) apply documented current theories related to intelligence, creativity, brain research, underlying exceptional cognition, asynchronicity and the expression of talent as it applies to all gifted students, including early childhood students, twice-exceptional learners (i.e., gifted and talented students with disabilities), highly gifted students, underachieving high-potential students, culturally and ethnically diverse gifted students, high-potential linguistically diverse students, students with unique affective needs, high-potential economically disadvantaged students and others;

5.05(1)(a)(ii) understand documented theories of human development, ages 4-21, as specifically related to developmentally appropriate strategies for gifted and talented learners;

5.05(1)(a)(iii) recognize the unique characteristics of gifted, talented and creative students, preschool through grade 12, and seek opportunities for enhancing their achievement as well as social-emotional development;

5.05(1)(a)(iv) apply understanding of development and individual academic and affective differences to respond to the needs of individuals with gifts;

5.05(1)(a)(v) identify how families and communities contribute to the development of individuals with gifts and talents and support their roles in the development of individuals with gifts; and

5.05(1)(a)(vi) recognize the influence of social and emotional development on interpersonal relationships and learning of individuals with gifts and talents.

5.05(1)(b) learning traits, needs and differences in order to:

5.05(1)(b)(i) evaluate the need for and draw upon multiple, appropriate gifted learner data, advanced learning plans (ALPs), evidence-based practices for differentiation including acceleration strategies, systemic support systems, strategies and specialized support services to assist with meeting the unique learning-related affective, social and cognitive needs of gifted and talented students related but not limited to:

5.05(1)(b)(i)(A) various types of giftedness and talent, including creativity;

5.05(1)(b)(i)(B) asynchronous development (i.e., the incongruences that may occur between a student's intellectual maturity and his/her social, emotional and physical development);

5.05(1)(b)(i)(C) psychological support;

5.05(1)(b)(i)(D) cognitive development and affective characteristics; and

5.05(1)(b)(i)(E) social and behavioral characteristics and needs, impact of multiple exceptionalities and multi-potentialities on gifted students.

5.05(1)(b)(ii) interpret gifted learner data to develop and monitor advanced learning plans (ALPs) and provide appropriate evidence-based practices for differentiation to support ongoing academic achievement and learning-related affective development of gifted and talented students; and

5.05(1)(b)(iii) apply concepts and interrelationships of giftedness, intelligence, creativity and leadership.

5.05(1)(c) diversity in order to:

5.05(1)(c)(i) recognize how language, culture, economic status, family background and/or area of disability can influence the learning of individuals with gifts and talents;

5.05(1)(c)(ii) appreciate influences of diversity factors, different beliefs, traditions and values across and within diverse groups as cognitive, social, emotional, cultural, linguistic and environmental effects that enhance or inhibit the development of giftedness; and

5.05(1)(c)(iii) seek to understand how language, culture and family background interact with an individual's predispositions to impact academic and social behavior, attitudes, values and interests.

5.05(2) Learning environment and structures: An educator with a gifted education core endorsement creates safe, inclusive and culturally responsive learning environments so that individuals with gifts and talents become effective learners and develop social and emotional well-being. The gifted educator applies knowledge of:

5.05(2)(a) social-emotional aspects in order to:

5.05(2)(a)(i) apply strategies for addressing specific social and emotional aspects that are unique to the gifted learner;

5.05(2)(a)(ii) create a safe, nurturing classroom environment that encourages mutual respect and emotional well-being;

5.05(2)(a)(iii) establish an environment in which creativity and giftedness can emerge and where students can feel safe to acknowledge, explore and express their uniqueness;

5.05(2)(a)(iv) acknowledge the value of each gifted student's contributions to the quality of learning; and

5.05(2)(a)(v) demonstrate understanding of the multiple environments that are part of a continuum of services for individuals with gifts and talents, including the advantages and disadvantages of various settings, by intentionally modifying classroom environments for different purposes.

5.05(2)(b) diversity in order to create a classroom environment that values diversity and individuality and fosters understanding and features intercultural experiences.

5.05(2)(c) skill development in order to:

5.05(2)(c)(i) plan for the development of coping skills in individuals with gifts and talents to address personal and social issues including discrimination and stereotyping;

5.05(2)(c)(ii) modify learning environments to enhance the independence, self-awareness and self-efficacy of gifted students;

5.05(2)(c)(iii) support students as they adapt to changes in their learning environments; and

5.05(2)(c)(iv) apply strategies for the development in gifted students of habits of mind, attitudes and skills needed for future success, such as the production of knowledge; independent, lifelong learning; self-evaluation; interdependence and goal-setting (realistic, challenging goals for self, academics and school-to-career).

5.05(2)(d) relationships in order to:

5.05(2)(d)(i) establish a nurturing, respectful and caring relationship with each student and encourage relationships among students;

5.05(2)(d)(ii) plan for the development of social interaction that encourages positive relationships among students and that builds collaboration skills; and

5.05(2)(d)(iii) facilitate appropriate flexible grouping practices for educational reasons.

5.05(3) Instructional planning and strategies: An educator with a gifted education core endorsement selects, adapts and uses a repertoire of evidence-based instructional strategies to advance the learning of individuals with gifts and talents. The gifted educator applies knowledge of:

5.05(3)(a) curriculum in order to:

5.05(3)(a)(i) develop long-range plans anchored in both general and special curricula;

5.05(3)(a)(ii) apply theories and research models that form the basis of curriculum development and instructional practice for individuals with gifts and talents;

5.05(3)(a)(iii) design and prescribe appropriate differentiated gifted program and curriculum options that are based on research-supported instructional strategies which include conceptual depth, advanced technological skills, accelerated presentation and pace, and creativity;

5.05(3)(a)(iv) apply documented best practices for teaching gifted and talented students, including those practices for the design and delivery of curriculum and the assessment of student learning including varied options and methods for acceleration, modification of content, content extensions (for depth and complexity) and expanded learning opportunities for students in order to meet specialized needs that may include resources beyond the classroom (mentorships, internships, dual enrollment, etc.);

5.05(3)(a)(v) foster the development of leadership skills through structured group processes;

5.05(3)(a)(vi) create environments and communicate high expectations for gifted students through rigorous learning activities; and

5.05(3)(a)(vii) promote active engagement in meaningful and challenging activities that extend learning.

5.05(3)(b) diversity in order to:

5.05(3)(b)(i) demonstrate understanding of cultural and linguistic factors, as well as the implications of being gifted and talented;

5.05(3)(b)(ii) design differentiated learning plans for individuals with gifts and talents including twice-exceptional students and individuals from diverse backgrounds;

5.05(3)(b)(iii) integrate perspectives of diverse groups into planning instruction for individuals with gifts and talents; and

5.05(3)(b)(iv) select curriculum resources, strategies and product options that respond to cultural, linguistic and intellectual differences.

5.05(3)(c) social-emotional aspects in order to plan and implement strategies for addressing the unmet social and emotional strengths and needs facing gifted students that differ from those of the general population.

5.05(3)(d) data-driven decisions in order to:

5.05(3)(d)(i) systematically translate shorter-range ALP academic and affective goals and objectives that take into consideration an individual's abilities and needs, the learning environment and cultural and linguistic factors; and

5.05(3)(d)(ii) evaluate the match between the identified educational needs of the student and appropriate and relevant strategies, programs and services.

5.05(4) Curricular content knowledge: An educator with a gifted education core endorsement demonstrates mastery of and pedagogical expertise in the content taught and uses knowledge of general and specialized curricula to advance learning for individuals with gifts and talents. The gifted educator applies knowledge of:

5.05(4)(a) differentiation in order to:

5.05(4)(a)(i) provide needs-based intensive research-based literacy and numeracy skill development and integrate such skills into lessons and assignments as well as across subject areas;

5.05(4)(a)(ii) implement cognitively engaging instruction intended to enhance student thinking, involve them in their own academic progress and create climates that encourage risk-taking, thinking outside the box and real-life scenarios;

5.05(4)(a)(iii) interpret data in order to supplement or modify assessments to address learning needs of individuals with gifts and talents;

5.05(4)(a)(iv) apply research-based effective differentiation strategies and instructional best practices to address all needs, including affective needs, of gifted learners; and

5.05(4)(a)(v) select, adapt and create appropriate, challenging materials in order to differentiate instructional strategies through general and specialized curricula.

5.05(4)(b) diversity in order to:

5.05(4)(b)(i) apply understanding of diversity and individual learning differences to inform the selection, development and implementation of comprehensive curricula for individuals with exceptionalities; and

5.05(4)(b)(ii) integrate perspectives of diverse groups into planning instruction for individuals with gifts and talents.

5.05(4)(c) cross-disciplinary curriculum in order to:

5.05(4)(c)(i) develop lessons that reflect the interconnectedness of content areas/disciplines;

5.05(4)(c)(ii) understand the role of central key concepts and structures of the discipline in order to implement instructional strategies that ensure that instruction articulates content and interdisciplinary connections;

5.05(4)(c)(iii) use understanding of gifted learner needs to organize knowledge, integrate cross-disciplinary skills and apply meaningful learning progressions within and across grade levels; and

5.05(4)(c)(iv) accelerate learning by elaborating on current lesson with connections to prior lessons within the content area and/or with other disciplines.

5.05(4)(d) thinking skills in order to:

5.05(4)(d)(i) implement tools of inquiry in content areas including higher-level thinking, critical-thinking and reasoning;

5.05(4)(d)(ii) apply strategies of creativity, acceleration, depth and complexity in academic subject matter and specialized domains; and

5.05(4)(d)(iii) facilitate in-depth studies, individual investigations and learner-directed experiences.

5.05(5) Assessment and evaluation: An educator with a gifted education core endorsement is knowledgeable about the identification and assessment of student needs and uses formative and summative information from data to incorporate appropriate planning, methods and processes to meet the needs of gifted and talented students in all domains. Advanced learning plans (ALPs) serve as a “road map” and are collaboratively developed specific to individual gifted learner needs and goals and are used to determine acceleration needs, differentiation of instruction and provisions for affective support. The gifted educator applies knowledge of:

5.05(5)(a) diversity in order to:

5.05(5)(a)(i) understand factors inhibiting the recognition of the potential of students who are gifted from underserved populations (including, but not limited to, students who are female, disabled, racially or ethnically diverse, economically disadvantaged, underachieving, rural and/or highly gifted or twice-exceptional) and use multiple sources, portfolios and other data for a body of evidence when considering students for identification;

5.05(5)(a)(ii) apply defensible methods for screening, identifying and assessing students who are gifted, including under-served populations;

5.05(5)(a)(iii) demonstrate understanding of the unique and sophisticated means by which individuals with gifts and talents including those from culturally diverse backgrounds may demonstrate their learning; and

5.05(5)(a)(iv) use assessment results to develop long- and short-range goals and objectives that take into consideration an individual’s abilities and needs, the learning environment and other factors related to diversity.

5.05(5)(b) identification in order to:

5.05(5)(b)(i) understand the process of and procedures for identification, legal policies and ethical principles of measurement and assessment related to referral, eligibility, program planning, instruction and placement for individuals with gifts and talents;

5.05(5)(b)(ii) implement technically sound, valid and reliable qualitative and quantitative instruments that minimize bias in identifying students for gifted education programs and services;

5.05(5)(b)(iii) use multiple methods of assessment and data sources in making educational decisions about identification of individuals with gifts and talents; and

5.05(5)(b)(iv) assess social-emotional needs of the gifted student in order to develop ALP goals specific to affective needs of the individual.

5.05(5)(c) instruction in order to:

5.05(5)(c)(i) use and interpret qualitative and quantitative assessments and information, aligned with Department of Education identification guidelines and procedures, to develop a profile of the strengths and weaknesses of each student with gifts and talents;

5.05(5)(c)(ii) interpret results of relevant data to diagnose educational needs and align instruction with academic standards and student assessment results;

5.05(5)(c)(iii) monitor and adjust instruction to enhance ongoing learning progress and modify learning plans based on ongoing assessment of individuals progress;

5.05(5)(c)(iv) apply a variety of pre-, formative and summative assessment methods and evaluate student performance based on multiple measures, employing alternative assessments and technologies such as performance-based assessment, portfolios and computer simulations, differentiated product-based assessments and off-level standardized assessments;

5.05(5)(c)(v) use assessment results to select, adapt and create materials to differentiate instructional strategies and general and specialized curricula to challenge individuals with gifts and talents at appropriate instructional levels. Use knowledge of measurement principles and practices to differentiate assessments and interpret results to guide educational decisions for individuals with gifts and talents;

5.05(5)(c)(vi) understand the affective aspects of giftedness that may affect a learner's achievement (perfectionism, self-concept, etc.); and

5.05(5)(c)(vii) use results from technically sound informal assessments (surveys, checklists, screening tools, observations, et.al.) to determine appropriate affective supports.

5.05(5)(d) communication in order to:

5.05(5)(d)(i) provide and implement actionable, timely, specific and individualized feedback for growth, learning and challenge;

5.05(5)(d)(ii) involve students in self-assessment and use formal and informal assessment feedback to monitor their learning;

5.05(5)(d)(iii) engage individuals with gifts and talents in evaluating the quality of their own learning and performance and in setting future goals and objectives; and

5.05(5)(d)(iv) communicate and interpret assessment information to students with gifts and talents and their parents/guardians.

5.05(5)(e) assessment of programming in order to:

5.05(5)(e)(i) provide information and input for evaluation of gifted programming; and

5.05(5)(e)(ii) evaluate implementation and effectiveness of strategies used to ensure delivery of program/service goals and objectives for all gifted learners, including those from diverse cultural and/or linguistic backgrounds.

5.05(6) Professional learning and ethical practice: An educator with a gifted education core endorsement applies foundational knowledge of the field and professional ethical principles and programming standards to inform gifted education practice, to engage in lifelong learning and to advance the profession. The gifted educator applies knowledge of:

5.05(6)(a) foundations in order to demonstrate knowledge about the foundations of the education of the gifted and the talented student including, but not limited to, the history of the education of the gifted and talented; proven and documented theories of giftedness; the wide variety of curricular strategies that provide for the effective teaching of gifted and talented students to include the current and evolving discipline based on philosophies, evidence-based principles and theories, relevant laws and policies, and diverse and historical points of view; and human issues.

5.05(6)(b) diversity in order to:

5.05(6)(b)(i) demonstrate understanding of key issues and trends including diversity and inclusion that connect general, special and gifted and talented education;

5.05(6)(b)(ii) respond appropriately to the impact of culture and language as it interacts with an individual's gifts and talents;

5.05(6)(b)(iii) recognize and plan for the many aspects of diversity of individuals with gifts and talents and their families;

5.05(6)(b)(iv) understand that personal and cultural frames of reference affect one's teaching of individuals with gifts and talents, including biases about individuals from diverse backgrounds and twice-exceptional learners; and

5.05(6)(b)(v) assess and evaluate personal skills and limitations in regard to the impact of the dominant culture's role in shaping schools and recognize how differences in values, languages and customs between school and home may provide opportunities for adjustments.

5.05(6)(c) ethical practice in order to:

5.05(6)(c)(i) maintain confidentiality of student, family and fellow teacher interactions, as well as student data, while using professional ethical principles, ethical practices and specialized program standards with all individuals with exceptionalities by supporting and using linguistically and culturally responsive practices;

5.05(6)(c)(ii) act in compliance with laws, policies and standards of ethical practice by engaging in professional activities that promote growth in individuals with gifts and talents and update him/herself on evidence-based best practices; and

5.05(6)(c)(iii) support positive and productive work environments by creating and maintaining collegial and productive work environments that respect and safeguard the rights of individuals with exceptionalities and their families.

5.05(6)(d) professional growth in order to:

- 5.05(6)(d)(i) view him/herself as a lifelong learner and regularly reflect on and adjust teaching practices, including self-evaluation of instruction by practice through continuous research-supported professional development;
 - 5.05(6)(d)(ii) reflect on personal practice to improve teaching and guide professional growth by involvement in professional development organizations, conferences, workshops and publications that are relevant to the field of gifted education; and
 - 5.05(6)(d)(iii) continuously broaden and deepen professional knowledge and expand expertise in regard to instructional technologies, curriculum standards, effective teaching strategies and assistive technologies that support access to and learning of challenging content by including current state standards, skills and local and state input.
- 5.05(7) Collaboration and communication: An educator with a gifted education core endorsement possesses skills in communicating, teaming and collaborating with diverse individuals and across diverse groups; demonstrates competence in interpersonal and technical communication skills as well as advanced oral and written skills; and applies knowledge of regulations and laws regarding confidentiality. The gifted educator applies knowledge of:
- 5.05(7)(a) ethics in order to maintain confidential communication about individuals with gifts and talents.
 - 5.05(7)(b) cultural responsiveness in order to:
 - 5.05(7)(b)(i) provide guardians/parents with information in their native language regarding diverse behaviors and characteristics that are associated with giftedness and information that explains the nature and purpose of gifted programming options;
 - 5.05(7)(b)(ii) understand how the characteristics of one's own culture and use of standard English can differ from other cultures and uses of language;
 - 5.05(7)(b)(iii) adjust and match communication methods to an individual's language proficiency and cultural and linguistic differences; and
 - 5.05(7)(b)(iv) implement ways of behaving and communicating that lead to more accurate interpretation and greater understanding among all cultural and linguistic groups.
 - 5.05(7)(c) effective communication in order to:
 - 5.05(7)(c)(i) recognize the importance of using verbal, nonverbal and written language effectively;
 - 5.05(7)(c)(ii) use communication strategies and resources to facilitate understanding of subject matter for individuals with gifts and talents who are English language learners;
 - 5.05(7)(c)(iii) collaborate with families, professional colleagues and other educators to use data to make identification decisions and select, adapt and use evidence-based strategies that promote challenging learning opportunities in general and specialized curricula;
 - 5.05(7)(c)(iv) implement strategies for advocating for students who are gifted and for enhancing community perceptions, interactions and involvement regarding gifted education;

5.05(7)(c)(v) facilitate school to career/life actions in a collaborative context that includes individuals with gifts and talents, families, professional colleagues and personnel from other agencies, as appropriate; and

5.05(7)(c)(vi) effect change by establishing a leadership role with parents, colleagues and other stakeholders through planned involvement and collaborative efforts that promote gifted student education.

5.05(8) An educator with a gifted education core endorsement is knowledgeable about professionalism and ethical practice and is able to:

5.05(8)(a) acquire the additional knowledge and skills necessary to effectively educate students with gifts and talents and to work successfully with their families, other professionals and interested stakeholders.

5.05(8)(b) participate in relevant professional and other organizations and remain current regarding publications and journals relevant to the field of educating students with gifts and talents.

5.05(8)(c) self-assess, design and implement an ongoing professional development plan relevant to being an effective educator of students with gifts and talents.

5.06 Gifted Education Specialist (Ages 4-21)

To be endorsed as a gifted education specialist, a candidate must hold an earned master's or higher degree in gifted education from an accepted institution of higher education; have completed an approved program for the preparation of gifted education specialists, including prescribed field experience and student teaching requirements; hold a Colorado initial or professional teacher license with a gifted education core endorsement or demonstrate through multiple performance measures the competencies required for a gifted education core endorsement:

5.06(1) Leadership and policy: The gifted education specialist provides leadership to formulate goals, set and meet high professional expectations, advocate for effective policies and evidence-based practices and is guided by professional ethics and practice standards. In this advanced role, the gifted educator has leadership responsibilities for promoting the success of individuals with exceptional learning needs, their families and colleagues. The gifted education specialist creates supportive environments that safeguard the legal rights of students, families and school personnel through policies and procedures that promote ethical and professional practice. The gifted education specialist applies knowledge of:

5.06(1)(a) accountability in order to:

5.06(1)(a)(i) articulate public policy as it relates to the development and implementation of programs and strategies for gifted and talented students that are consistent with and aligned to adopted policies and objectives of the school district;

5.06(1)(a)(ii) integrate gifted education into the school's and district's educational program design, the delivery of instruction and other educational processes, and the organization of the school day;

5.06(1)(a)(iii) understand legal issues impacting the field of gifted education;

5.06(1)(a)(iv) prepare budgets, grants and reports;

5.06(1)(a)(v) apply knowledge of theories, evidence-based practices, relevant laws and policies to advocate for programs, supports and a continuum of services for individuals with exceptionalities; and

5.06(1)(a)(vi) ensure privacy issues in regard to individual students and record-keeping.

5.06(1)(b) collaboration in order to:

5.06(1)(b)(i) demonstrate effective leadership skills for designing and implementing programs for and delivering instruction to gifted students;

5.06(1)(b)(ii) utilize effective leadership skills for designing and implementing programs for and delivering instruction to gifted students;

5.06(1)(b)(iii) provide leadership to create procedures that respect all individuals and permit professionals to practice ethically;

5.06(1)(b)(iv) create positive and productive work environments by sharing information regarding positive impacts with colleagues;

5.06(1)(b)(v) implement strategies to promote collegial understanding of the academic and affective needs of gifted students among regular classroom teachers, administrators and boards of education; and

5.06(1)(b)(vi) work with professional, governmental and/or community agencies to advocate for curricular, school and instructional improvements.

5.06(1)(c) advocacy in order to:

5.06(1)(c)(i) communicate with policy makers and the general public about issues inherent in the education of gifted and talented students and about how to resolve concerns appropriately, effectively and practically;

5.06(1)(c)(ii) discuss potential improvements to policies and procedures with administrators to better address student, family and school needs;

5.06(1)(c)(iii) contribute to school and/or district committees to improve and align gifted services for students and their families;

5.06(1)(c)(iv) promote appropriate programming regarding the education of gifted and talented students to external agencies and groups;

5.06(1)(c)(v) promote policies and practices that improve programs, services and outcomes for individuals with exceptionalities;

5.06(1)(c)(vi) seek allocation of appropriate resources for the preparation and professional development of all personnel who serve individuals with exceptionalities; and

5.06(1)(c)(vii) provide opportunities and support for acceleration for gifted students in content, process and/or product.

5.06(1)(d) professional development in order to:

- 5.06(1)(d)(i) promote high professional self-expectations and help others understand the needs of individuals with exceptional learning needs within the context of an organization's mission;
 - 5.06(1)(d)(ii) plan, facilitate and/or provide professional development activities for increasing the knowledge and skills of regular classroom teachers in the areas of gifted identification methods and procedures, specific research-based instructional strategies and curriculum for gifted learners, and assessment methods and data-analysis to enhance the general improvement of the education of gifted and talented students;
 - 5.06(1)(d)(iii) structure, direct and supervise the activities of para-educators, volunteers and tutors; and
 - 5.06(1)(d)(iv) participate in self-evaluation and in organizations and activities that provide professional development opportunities and information that can increase professional competence and contribute to the advancement of the education of the gifted and talented student.
- 5.06(2) Collaboration, communication and coordination: The gifted education specialist has a deep understanding of the centrality and importance of consultation and collaboration to the roles within gifted education and uses this deep understanding to improve programs, services and outcomes for individuals with exceptional learning needs. The gifted education specialist understands the significance of the role of collaboration and promotes understanding, resolves conflicts and builds consensus among both internal and external stakeholders to provide services to individuals with exceptional learning needs and their families. The gifted education specialist possesses current knowledge of research on stages and models in both collaboration and consultation, and ethical and legal issues related to consultation and collaboration, and applies knowledge of:
- 5.06(2)(a) diversity in order to recognize cultural factors that promote effective communication and collaboration and to respond respectfully to individuals, families, school personnel and specific communities/community members in order to enhance or improve opportunities for gifted students.
 - 5.06(2)(b) collaboration in order to:
 - 5.06(2)(b)(i) maximize opportunities to promote understanding, resolve conflicts and build consensus for improving programs, services and outcomes for individuals with exceptionalities;
 - 5.06(2)(b)(ii) identify effective communication, collaboration, consultation and leadership skills and apply these skills to the effective implementation of education for gifted learners;
 - 5.06(2)(b)(iii) apply effective models and strategies for consultation, conferencing and collaboration with families and individuals with gifts and talents;
 - 5.06(2)(b)(iv) coordinate transitions between grade levels and buildings;
 - 5.06(2)(b)(v) implement goals and expectations through the advanced learning plan (ALP) process; and

5.06(2)(b)(vi) identify stakeholders and develop an ongoing plan for including and communicating with all stakeholders including classroom teachers, special services providers, parents, community members and students.

5.06(2)(c) effective problem-solving in order to:

5.06(2)(c)(i) use group problem-solving skills to develop, implement and evaluate collaborative activities;

5.06(2)(c)(ii) identify potential problems or issues, brainstorm possible solutions, evaluate and select best alternatives, develop a plan for implementation, implement and reflect on the process and results; and

5.06(2)(c)(iii) implement strategic planning in collaboration with teachers and district or administrative unit personnel in order to improve gifted student services.

5.06(3) Research and inquiry: The gifted education specialist has a comprehensive knowledge of gifted education as an evolving and changing discipline based on philosophies, evidence-based principles and theories, relevant laws and policies, diverse and historical points of view and issues that have influenced and continue to influence gifted education and the education of and services for individuals with exceptionalities both in school and in society. The gifted education specialist applies knowledge of:

5.06(3)(a) gifted education history and current theories in order to:

5.06(3)(a)(i) demonstrate comprehensive understanding of the foundations of education of the gifted and the talented student including but not limited to the history of the education of the gifted and talented, as well as proven and documented theories of giftedness;

5.06(3)(a)(ii) distinguish between theory and empirically proven research;

5.06(3)(a)(iii) apply understanding of current literature related to gifted education;

5.06(3)(a)(iv) recommend a variety of research-based curricular strategies that provide for the effective teaching of gifted and talented students; and

5.06(3)(a)(v) identify, critique and utilize research and applicable theory of curricular strategies as a basis for decision-making and practice for gifted students.

5.06(3)(b) data-analysis and measurement in order to:

5.06(3)(b)(i) interpret data as a basis for decision-making;

5.06(3)(b)(ii) conduct action research in order to investigate an area of interest/s to effect change at a local level; and

5.06(3)(b)(iii) evaluate identification procedures, curriculum and gifted programming policies and procedures to revise and improve gifted student education and opportunities.

5.06(4) Curriculum content: Curriculum and instructional planning is at the center of gifted and talented education. The gifted education specialist develops long-range plans anchored in both general and special curricula and systematically translates shorter-range goals and objectives that take into consideration an individual's abilities and needs, the learning environment and cultural and

linguistic factors. Understanding of these factors, as well as the implications of being gifted and talented, guides the selection, adaptation and creation of materials and use of differentiated instructional strategies. Learning plans are modified based on ongoing assessment of the individual's progress. The gifted education specialist applies knowledge of:

5.06(4)(a) research in order to:

5.06(4)(a)(i) use information from theories and research to revise and/or differentiate units, lesson plans and strategies for curriculum development and instructional practice for individuals with gifts and talents;

5.06(4)(a)(ii) apply appropriate theoretical models, structures and systems to the development of gifted programs and services; and

5.06(4)(a)(iii) evaluate and recommend program/services prototypes, grouping practices and educational principles that offer appropriate foundations for the development of a defensible program/service for gifted education.

5.06(4)(b) general and specialized curricula in order to:

5.06(4)(b)(i) develop long-range plans anchored in both general and special curricula, and systematically translate shorter-range goals and objectives that take into consideration an individual's abilities and needs, the learning environment and cultural and linguistic factors;

5.06(4)(b)(ii) improve programs, supports and services at classroom, school, community and educational system levels;

5.06(4)(b)(iii) apply pedagogical content knowledge to instructing learners with gifts and talents;

5.06(4)(b)(iv) emphasize the development, practice and transfer of advanced knowledge and skills across environments throughout the lifespan leading to creative, productive careers in society for individuals with gifts and talents;

5.06(4)(b)(v) develop scope and sequence plans for individuals with gifts and talents; and

5.06(4)(b)(vi) provide opportunities for acceleration in content areas.

5.06(4)(c) diversity in order to:

5.06(4)(c)(i) apply understanding of diversity and individual learning differences to inform the selection, development and implementation of comprehensive curricula for individuals with exceptionalities; and

5.06(4)(c)(ii) select curriculum resources, strategies and product options that respond to cultural, linguistic and intellectual differences among individuals with gifts and talents.

5.06(4)(d) differentiation in order to:

5.06(4)(d)(i) recognize features that distinguish differentiated curriculum from general curricula for individuals with exceptional learning needs;

5.06(4)(d)(ii) align differentiated instructional plans with local, state and national curricular standards;

5.06(4)(d)(iii) select and adapt a variety of differentiated curricula that incorporate advanced, conceptually challenging, in-depth, distinctive and complex content; and

5.06(4)(d)(iv) apply models for delivery of appropriately differentiated content, processes, products, affects and learning environments (i.e., unique, complex and abstract) designed to meet the unique cognitive and affective needs of gifted learners.

5.06(4)(e) standards in order to:

5.06(4)(e)(i) use deep understanding of educational standards to help all individuals with exceptional learning needs access challenging curriculum; and

5.06(4)(e)(ii) apply knowledge of common core standards and understand the levels of rigor embedded in the standards.

5.06(4)(f) individual differences in order to:

5.06(4)(f)(i) emphasize curriculum for individuals with gifts and talents within cognitive, affective, aesthetic, social and linguistic domains;

5.06(4)(f)(ii) integrate academic and career guidance experiences into the learning plan for individuals with gifts and talents; and

5.06(4)(f)(iii) provide and/or facilitate social-emotional support to meet specific gifted student affective needs.

5.06(5) Assessment: Assessment is critical to the advanced role of the gifted education specialist.

Underlying assessment is the knowledge of systems, theories and standards-related educational assessment, along with skills in examining the technical adequacy of instruments and the implementation of evidence-based practices in assessment. It is critical that assessments that minimize bias are used in the selection of instruments, methods and procedures for both programs and individuals. With respect to assessment of individuals with gifts and talents, the gifted education specialist applies knowledge and skill to all stages and purposes of assessment, including the identification of abilities, strengths and interests, and when monitoring and reporting learning progress in the general education curriculum as well as in the specialized curriculum in their gifted education placement. The gifted education specialist applies knowledge of:

5.06(5)(a) technical aspects in order to understand measurement theory and practices for addressing issues of validity, reliability, norms, bias and limitations as well as interpretation of assessment results.

5.06(5)(b) assessment for identification in order to:

5.06(5)(b)(i) recommend and implement valid and reliable assessment practices and approaches to minimize bias for identifying students with gifts and talents;

5.06(5)(b)(ii) review, select and use multiple psychometrically sound, nonbiased, equitable qualitative and quantitative instruments from a variety of sources to identify individuals with gifts and talents in order to assess their diverse abilities, strengths, talents and interests;

5.06(5)(b)(iii) provide assessment tools in the child's native language or in nonverbal formats.

5.06(5)(b)(iv) interpret multiple assessments in different domains and understand the uses and limitations of the assessments in identifying the needs of students with gifts and talents; and

5.06(5)(b)(v) inform all parents/guardians about the identification process, obtain parental/ guardian permission for assessments, use culturally sensitive checklists and elicit evidence regarding the child's interests and potential outside of the classroom setting.

5.06(5)(c) assessment of instruction in order to:

5.06(5)(c)(i) monitor the progress of individuals with gifts and talents in the general education and specialized curricula;

5.06(5)(c)(ii) pre-assess the learning needs of individuals with gifts and talents in various domains and adjust instruction based on ongoing, continual assessment;

5.06(5)(c)(iii) analyze student results in order to determine most effective practices and supports;

5.06(5)(c)(iv) provide appropriate assessments that require higher-level thinking and application of skills to a final product or performance; and

5.06(5)(c)(v) monitor and adjust expectations for student goals as stated on the advanced learning plan.

5.06(6) Professional and ethical practice: The gifted education specialist uses foundational knowledge of the field, professional ethical principles and program standards to inform gifted education practice, engage in lifelong learning, advance the profession and perform leadership responsibilities to promote the success of professional colleagues and individuals with exceptionalities. The gifted education specialist applies knowledge of:

5.06(6)(a) professional development in order to:

5.06(6)(a)(i) lead professional development efforts and facilitate learning communities to increase professional knowledge and expertise focused on addressing gifted student needs;

5.06(6)(a)(ii) align professional development initiatives with school and district initiatives that address gifted education instructional strategies based on current research;

5.06(6)(a)(iii) advocate for professional development that is evidence-based and targeted toward improving gifted student outcomes;

5.06(6)(a)(iv) plan, present and evaluate professional development focusing on effective and ethical practice at all organizational levels; and

5.06(6)(a)(v) collaborate with district personnel and teachers to develop and implement a long-term professional development plan focused on increasing educator knowledge in the area of gifted education.

5.06(6)(b) diversity in order to:

5.06(6)(b)(i) demonstrate high professional expectations and ethical practice and create supportive environments that increase diversity at all levels of gifted and talented education;

5.06(6)(b)(ii) model and promote respect for all individuals and facilitate ethical professional practice; and

5.06(6)(b)(iii) understand and implement district and state policies designed to foster equity in gifted programming and services.

5.06(6)(c) professional responsibility in order to:

5.06(6)(c)(i) actively facilitate and participate in the preparation and induction of prospective gifted educators;

5.06(6)(c)(ii) promote the advancement of the gifted profession;

5.06(6)(c)(iii) implement performance feedback from supervisor and/or colleagues to improve practice;

5.06(6)(c)(iv) advocate for laws based on solid evidence-based knowledge to support high-quality education for individuals with exceptional learning needs;

5.06(6)(c)(v) conduct applied work to contribute to field; and

5.06(6)(c)(vi) ensure confidentiality of student information and records.

5.06(7) Programming services and program evaluation: The gifted education specialist facilitates the continuous improvement of general and gifted education programs, supports and services at the classroom, school and system levels for individuals with exceptionalities. The gifted education specialist applies knowledge of:

5.06(7)(a) programming services in order to:

5.06(7)(a)(i) apply knowledge of cognitive science, learning theory and instructional technologies to improve instructional programs at the school- and system-wide level;

5.06(7)(a)(ii) design and develop systematic program and curriculum models for enhancing talent development in multiple settings; and

5.06(7)(a)(iii) implement knowledge of program strategies, such as acceleration and enrichment, and research regarding effective instructional strategies to services for gifted and/or talented students.

5.06(7)(b) diversity in order to:

5.06(7)(b)(i) apply knowledge of special populations of gifted and talented students in the development of appropriate program and instructional-delivery decisions based on the unique and varied characteristics and needs of such students including, but not limited to, early childhood students; twice-exceptional learners (i.e., gifted and talented students with disabilities); highly gifted students; underachieving, high-potential students; culturally and ethnically diverse students; students with unique affective needs and high-potential, economically disadvantaged students; and

5.06(7)(b)(ii) apply understanding of the effects of cultural, social and economic diversity and variations of individual learners' differences to inform development of programs, supports and services for individuals with exceptional learning needs.

5.67(7)(c) program evaluation in order to:

5.06(7)(c)(i) implement strategies to conduct program/service evaluation for continued improvement;

5.06(7)(c)(ii) design and implement research activities to evaluate the effectiveness of instructional practices and to assess progress toward the organizational vision, mission and goals of their programs;

5.06(7)(c)(iii) develop procedures for continuous improvement management systems;

5.06(7)(c)(iv) design and implement evaluation activities to improve programs, supports and services for individuals with exceptionalities;

5.06(7)(c)(v) evaluate progress toward achieving the vision, mission and goals of programs, services and supports for individuals with exceptionalities;

5.06(7)(c)(vi) prepare for, participate in and evaluate results from the Colorado Gifted Education Review (CGER) process and develop goals and next steps as reflected in the CGER Timeline and the Unified Improvement Plan, Gifted Addendum (UIP-Gifted); and

5.06(7)(c)(vii) ensure that the district's gifted definition, identification process, programming options based on individual ALPs and assessments are aligned and effective in meeting gifted learner needs.

6.0 Graduate Endorsements

The following shall serve as standards for endorsements requiring the completion of graduate-level academic degrees and/or programs. All endorsement standards must be reviewed as needed for continuing appropriateness, applicability and benefit to Colorado students and schools.

6.01 (Rule number reserved.)

6.02 Teacher-Librarian (grades K-12)

To be endorsed as a teacher-librarian, an applicant must hold an earned bachelor's degree from an accepted institution of higher education; hold a Colorado initial or professional teacher license; have completed an approved program in library science or the equivalent, including field work in diverse K-12 settings and grade levels and a supervised practicum or internship that includes both elementary and secondary school library experience (the practicum or internship may be waived by the accepted institution upon comparable teacher-librarian experience as determined by the educator preparation program); and have demonstrated knowledge and performance competency, including, but not limited to, those listed below:

6.02(1) Quality standard 1: mastery and pedagogical instruction – A teacher demonstrates mastery of and pedagogical expertise in the content area(s) taught. The elementary teacher is an expert in research-based literacy and mathematics and is knowledgeable in all other content areas taught (e.g., science, social studies, the arts, physical education or world languages). The secondary

teacher has knowledge of research-based literacy and mathematics and is an expert in specific content area(s) (CDE Model Teacher Evaluation System). A candidate for a teacher librarian endorsement demonstrates skills to implement the principles of effective teaching and learning that contribute to an active, inquiry- and standards-based approach to learning. The candidate develops lessons that reflect the interconnectedness of content areas/disciplines and makes use of a variety of instructional strategies and assessment tools to design and develop learning experiences in partnership with classroom teachers and other educators (AASL).

- 6.02(1)(a) Instructional pedagogy – The candidate employs inquiry-based instructional design including differentiated instruction to reach all learners. The candidate is also knowledgeable in designing and delivering learning instruction along with technology literacy, information literacy and digital citizenship that empowers K-12 students to be workforce ready.
- 6.02(1)(b) Instructional design – The candidate is knowledgeable about leadership techniques for facilitating a standards-based backward design process for authentic, active learning lessons and units. The candidate provides an environment where students can practice and learn new strategies and receive feedback while learning content and demonstrating understanding.
- 6.02(1)(c) Children's and young adult literature reading promotion – The candidate promotes reading for children, young adults and other education professionals through the use of high-quality, high-interest literature in print and digital formats that reflect diverse developmental, cultural, social and linguistic needs of K-12 students and communities. The candidate is aware of current trends in literature and displays the ability to work within the school-wide culture to foster curiosity in student and staff learners. The candidate is knowledgeable about a variety of innovative formats to teach, enrich and expand critical, creative and independent thinking.
- 6.02(1)(d) Research-based Literacy strategies – The candidate demonstrates knowledge of research-based reading strategies including reading fluency and reading comprehension to increase students' reading levels, developmental abilities and personal interests. The candidate demonstrates the importance of systematic and explicit reading development tied to the overall school goals for literacy development in students.
- 6.02(2) Quality standard 2: safe, inclusive, respectful environment – A teacher establishes safe, inclusive and respectful learning environments for a diverse population of students.
- 6.02(2)(a) Respect for diversity – The candidate demonstrates the ability to develop a collection of reading and information materials in print and digital formats that support the diverse developmental, cultural, social and linguistic needs of K-12 students and their communities.
- 6.02(2)(b) Equitable access – The candidate demonstrates the ability to develop solutions for addressing physical, social and intellectual barriers to equitable access to resources and services. The candidate works with the school administration team to allow for collaboration and flexibility to be able to teach at point of need. The candidate allows for and supports flexibility so that the library is available during and after school hours for students, teachers, parents and the community. The candidate demonstrates the ability to develop and support 24/7 access to learning resources.
- 6.02(3) Quality standard 3: plan and deliver effective instruction – A teacher plans and delivers effective instruction and creates environments that facilitate learning for students (CDE Model Teacher Evaluation System).

- 6.02(3)(a) Collaboration in planning and teaching -- The candidate demonstrates the ability to work with other teachers from a variety of disciplines and grade levels to systematically integrate Colorado Academic Standards skills. The candidate develops a collaborative culture and demonstrates the ability to model for students how to work collaboratively with one another and provide evidence of new thinking and learning.
- 6.02(3)(b) Technology integration – The candidate is knowledgeable in recommending current and meaningful use of technology and is part of school-level technology discussions. The candidate models a classroom that integrates skills from the Colorado Academic Standards (i.e., critical thinking, invention, information literacy and digital citizenship) through the use of innovative technology strategies. The candidate demonstrates the ability to utilize a variety of current technology tools in the classroom and to incorporate emerging tools as they become available, as well as the ability to have a digital presence within their schools and learning communities.
- 6.02(3)(c) Assessment of learning – The candidate demonstrates the ability to develop consistent means of assessing how well students are acquiring essential skills and knowledge through the use of formative or summative assessments such as rubrics, checklists and journaling.
- 6.02(3)(d) Learning environment – The candidate demonstrates the ability to create and maintain a flexible, dynamic learning environment with the goal of producing successful learners skilled in multiple literacies.
- 6.02(3)(e) Collection development – The candidate demonstrates the ability to develop and implement policies in collaboration with district and appropriate school personnel for collection development/selection, weeding criteria and the reconsideration of challenged resources, with procedures used to defend the challenged material, that is consistent with the mission, goals and objectives of the school building and school district, through:
- 6.02(3)(e)(i) materials acquisition and organization – The candidate demonstrates the ability to select a balanced collection of digital and print resources that meet the diverse curricular, personal and professional needs of students, teachers and administrators. The candidates demonstrates the ability to organize collections for easy access, one that aligns to curriculum, meets independent reading needs and reflects diverse points of view;
- 6.02(3)(e)(ii) resource review – The candidate identifies and provides support for diverse student information needs. The candidate models multiple strategies for students, other teachers and administrators to locate, evaluate and ethically use information for specific purposes. The candidate collaborates with students, other teachers and administrators to efficiently access, interpret and communicate information; and
- 6.02(3)(e)(iii) materials deselection – The candidate regularly weeds the collection to create a viable and current collection for an aesthetically pleasing environment designed to meet the diverse curricular, personal and professional needs of students, teachers and administrators.
- 6.02(3)(f) Program management – The candidate designs strong library programs with resources, services, policies, procedures and programming that are aligned with the school's goals. The candidate demonstrates the ability to practice the ethical principles of their profession, advocate for intellectual freedom and privacy, and promote and model digital citizenship and responsibility. The candidate educates the school community on the ethical use of information and ideas.

- 6.02(3)(g) Supervision – The candidate demonstrates knowledge of the ability to recruit, supervise and evaluate library staff and volunteers.
- 6.02(3)(h) Budget management – The candidate demonstrates the ability to prepare, justify and maintain the school library program budget to ensure funding for the continuous acquisition of standards-based curriculum materials and services. The candidate displays the knowledge to pursue school-aligned alternative funding sources (such as grants or sponsorships) at the local, state and national level to enhance library funding and general program support.
- 6.02(3)(i) Program analysis/advocacy – The candidate uses evidence-based action research to collect data. The candidate interprets and uses data to create and share new knowledge to improve practice in school libraries. The candidate shows the ability to manage, organize and evaluate school library physical resources (facilities), fiscal resources (budgets) and human resources (personnel) to ensure the school library program recognizes, celebrates and advocates for the curricular, personal and professional needs of all stakeholders.
- 6.02(4) Quality standard 4: reflect on practice –A teacher reflects on personal teaching practice (CDE Model Teacher Evaluation System).
 - 6.02(4)(a) Strategic planning – The candidate displays the leadership skills to develop school-aligned yearly goals (growth plans, action plans, etc.) as a guide to creating a library program and instruction that positively impacts student achievement and helps students thrive in today's society. The candidate demonstrates the ability to effectively use feedback and data to measure implementation of yearly growth plan goals. The candidate makes effective use of data and information to assess how the library program addresses the needs of diverse communities.
 - 6.02(4)(b) Lifelong learning – The candidate plans for ongoing professional growth and know-how to articulate a personal learning network:
 - 6.02(4)(b)(i) instructional/digital coach – The candidate displays the ability to work directly and indirectly with teachers, staff and the building principal(s) to improve the effectiveness of classroom instruction and increase student learning, performance and overall achievement especially in the areas of technology skills and digital literacy (information literacy, technology literacy and digital citizenship); and
 - 6.02(4)(b)(ii) professional development – The candidate demonstrates the ability to be an instructional leader who develops and leads a variety of technology professional development opportunities (aligned with school's goals) for staff.
- 6.02(5) Quality standard 5: leadership and professional learning – A teacher demonstrates leadership (CDE Model Teacher Evaluation System).
 - 6.02(5)(a) Development and/or leading professional learning networks (PLN's) –The teacher-librarian educator shall self-assess effectiveness based on student achievement and pursue continuous professional development in a variety of ways (e.g. digitally, in-person and networking) through appropriate activities, coursework and participation in relevant professional organizations.
 - 6.02(5)(b) Family and community engagement – The candidate understands the importance of partnering with families to coordinate learning between home and school and advocates

for the inclusion of teachers and families in education and government decision-making processes.

6.03 Adapted Physical Education (Ages 3-21)

To be endorsed in adapted physical education, an applicant must hold a Colorado initial or professional license with a physical education endorsement; have completed an approved graduate-level program in adapted physical education for school-aged children, including a 200-hour practicum across elementary and secondary grade levels; and have demonstrated the competencies below:

6.03(1) The adapted physical education educator has a strong foundational knowledge of the major theories, concepts and research pertaining to:

6.03(1)(a) human growth and development and its unique application to students with disabilities including;

6.03(1)(a)(i) the principles behind how motor skills are learned and developed;

6.03(1)(a)(ii) advanced motor development, gross motor skills and patterns, physical and motor fitness, and the physiological and biomechanical applications for students with disabilities; and

6.03(1)(a)(iii) psychomotor, cognitive and affective learning outcomes of physical education;

6.03(1)(b) the disability categories and other impairments and their effect on typical development including;

6.03(1)(b)(i) the specific learning styles, contraindications and medical implications associated with different disabilities;

6.03(1)(b)(ii) communication styles of students with disabilities, including those who are nonverbal or have limited verbal expression, and the use of assistive technology; and

6.03(1)(b)(iii) the unique social-emotional attributes of students with disabilities and their effect on peer interaction and participation;

6.03(1)(c) the needs and characteristics of students with disabilities and the developmental challenges that can prevent them from participating in physical education exercises and activities including;

6.03(1)(c)(i) the use of and safety concerns related to specialized equipment used by students with disabilities;

6.03(1)(c)(ii) the social implications and impact the use of such equipment has on the student, educator and classroom environment; and

6.03(1)(d) creating safe, engaging and inclusive environments for all students to receive services, support and instruction in the least restrictive environment.

6.03(2) The adapted physical education educator is knowledgeable about the importance of student evaluation, and the administration and use of standardized and/or criterion-referenced instruments for assessing and determining the current level of motor performance in students with disabilities via:

- 6.03(2)(a) fitness and motor skills tests, reflex and perceptual inventories, motor development profiles and direct measures;
 - 6.03(2)(b) the comparison of norm-referenced and criterion-reference assessments;
 - 6.03(2)(c) formal and informal methods for gathering both qualitative and quantitative data on motor performance, physical fitness, play, recreation, leisure and sports concepts and skills; and
 - 6.03(2)(d) effective and appropriate reporting and communication about assessment results to all members of the individualized education program (IEP) team.
- 6.03(3) The adapted physical education educator is knowledgeable about the professional, legal and ethical practices of adapted physical education and:
- 6.03(3)(a) understands federal and state special education laws and other regulations that govern adapted physical education in the state of Colorado, including:
 - 6.03(3)(a)(i) the IEP development process and implementation;
 - 6.03(3)(a)(ii) eligibility requirements for adapted physical education services;
 - 6.03(3)(a)(iii) the adapted physical education educator's role in the IEP process and data collection for progress monitoring; and
 - 6.03(3)(b) conducts himself in an ethical manner when providing programs and services for students with disabilities.
- 6.03(4) The adapted physical education educator is knowledgeable about the methodology of teaching and engaging students with disabilities and able to:
- 6.03(4)(a) advocate for and effectively implement appropriate instructional strategies, adaptations and accessibility for attaining individualized, measurable goals for students with disabilities using safe and developmentally appropriate physical education in a variety of settings, related to:
 - 6.03(4)(a)(i) behavior management;
 - 6.03(4)(a)(ii) equipment development and adaptation (e.g., modifications and/or accommodations);
 - 6.03(4)(a)(iii) unified physical education, reverse inclusion and team and/or co-teaching; and
 - 6.03(4)(a)(iv) research- and evidence-based practice;
 - 6.03(4)(b) collaborate and consult with other instructors and service providers, family members and community-based organizations;
 - 6.03(4)(c) develop and implement extracurricular athletic programs and interscholastic adapted sports programs for students with disabilities; and
 - 6.03(4)(d) implement sequential and continuous transition planning for students with disabilities to ensure postsecondary and workforce readiness, successful transition to adulthood, and enhance the student's ability to incorporate appropriate fitness and wellness activities across the student's lifespan.

6.03(5) The adapted physical education educator is knowledgeable about the cultural values of students with disabilities and able to demonstrate and effectively instruct these students about:

6.03(5)(a) the activities specified in section 4.16 of these rules;

6.03(5)(b) movement opportunities and sport and recreation options outside the classroom for lifelong wellness, including intramural and lifetime sports and community-based support services and funding;

6.03(5)(c) emotional regulation; and

6.03(5)(d) social skills, identity, self-advocacy and acceptance of self and peers.

6.03(6) The adapted physical education educator shall self-assess the effectiveness of instruction and practice based on their students with disabilities' achievement and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.

6.04 Reading Specialist (Grades K-12)

To be endorsed as a reading specialist, an applicant must hold a Colorado initial or professional teacher license hold a master's or higher degree in reading; have completed an approved graduate program for the preparation of reading specialists at an accepted institution of higher education, including a supervised practicum or internship as a reading specialist; have three or more years of full-time, demonstrated classroom teaching experience; must be knowledgeable about research-based literacy instruction as outlined in rule 4.02(5) – 4.02(13) and the Colorado Academic Standards in reading, writing and communicating, and must demonstrate the competencies below:

6.04(1) The reading specialist is knowledgeable about literacy assessments and evaluation and is able to:

6.04(1)(a) utilize and implement validated screening assessments designed to identify students at risk for reading difficulties, including students who are multi-lingual and English-language learners;

6.04(1)(b) utilize information from screening (interim) assessments, diagnostic surveys, progress monitoring and descriptive data to:

6.04(1)(b)(i) make instructional decisions regarding content, entry point, pace, intensity and student group; and

6.04(1)(b)(ii) determine appropriate methods for literacy instruction and intervention.

6.04(1)(c) support teachers in administering, understanding, interpreting and using the results of formal and informal assessments in reading, spelling, writing and relevant literacy subskills that are targeted for instruction;

6.04(1)(d) administer and interpret diagnostic assessments of:

6.04(1)(d)(i) phonological and phonemic awareness;

6.04(1)(d)(ii) decoding skill, oral reading fluency and comprehension; and

6.04(1)(d)(iii) spelling and writing.

6.04(1)(e) utilize formative and summative assessment data to:

6.04(1)(e)(i) evaluate instructional effectiveness at all levels – student, classroom, grade, school and district – to inform decisions about resources and instruction; and

6.04(1)(e)(ii) set and evaluate specific and measurable short- and long-term goals for the student, classroom and/or school.

6.04(2) The reading specialist is knowledgeable about the nature, manifestations and prevalence of and research-supported treatments for reading and writing difficulties and:

6.04(2)(a) recognizes that dyslexia, dysgraphia and other reading disorders exist along a continuum of severity;

6.04(2)(b) understands how reading difficulties and their characteristics may change over time in response to instruction and development;

6.04(2)(c) understands how both intrinsic and extrinsic factors contribute to reading difficulties, including how certain conditions/exceptionalities can affect reading (e.g., Attention Deficit Hyperactivity Disorder, Autism Spectrum Disorder and language processing and comprehension disorders);

6.04(2)(d) recognizes the social-emotional impact reading difficulties may have on students and their families;

6.04(2)(e) has a foundational knowledge of the tenets of National Institute of Child Health and Human Development (NICHD)/International Dyslexia Association's (IDA) definition of dyslexia; and

6.04(2)(f) recognizes the distinguishing characteristics of a person with dyslexia.

6.04(3) The reading specialist is trained to effectively instruct, direct or supervise instruction of students with reading disorders and demonstrates expertise and advanced knowledge and application of:

6.04(3)(a) processes, strategies and approaches to reading;

6.04(3)(b) explicit, systemic and evidence-based learning and instruction addressing:

6.04(3)(b)(i) the five components of scientifically based reading, including phonemic awareness, phonics, vocabulary, fluency, and comprehension;

6.04(3)(b)(ii) cognitive skills associated with reading success (e.g., working memory, rapid naming ability, metacognition);

6.04(3)(b)(iii) oral language and writing development; and

6.04(3)(c) targeted, structured multisensory instruction strategies for phonologically based disorders.

6.04(4) The reading specialist shall self-assess the effectiveness of instruction, direction and/or supervision based on the achievement of students and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.

6.05 Director of Special Education (Grades K-12)

The director of special education must hold an earned master's or higher degree in special education or a graduate degree that demonstrates knowledge and application of standards for the specialist (as determined by the Department) from an accepted institution of higher education; have completed a minimum of two years of experience working with students with disabilities; have completed an approved program for the preparation of special education directors, including a supervised field-based experience; and meet the standards for professional competency outlined in rule 1 CCR 301-37 6.11-6.19 for the initial administrator license with a director of special education endorsement.

6.06 Director of Gifted Education (Grades K-12)

The director of gifted education must hold an earned master's or higher degree in gifted education from an accepted institution of higher education or a graduate degree that demonstrates knowledge and application of standards for the specialist (as determined by the Department); have completed a minimum of two years of experience working with students with exceptional academic and talent aptitude (gifted students); have completed an approved program for the preparation of gifted education directors, including a supervised field-based experience; and meet the standards for professional competency outlined in rule 1 CCR 301-37 6.20-29 for the initial administrator license with a director of gifted education endorsement.

7.00 Special services endorsements

The following shall serve as standards for special services endorsements on an initial or professional special services provider license.

7.01 School Audiologist (Ages Birth-21)

To be endorsed as a school audiologist, an applicant must hold an earned master's or higher degree from an accepted institution of higher education or, for candidates who graduate after 2007, hold a clinical doctorate from an accepted institution of higher education; have successfully completed an approved program in audiology; have successfully completed a practicum or internship in a school setting equivalent to a minimum of eight weeks, full-time, under the supervision of a professionally licensed or masters-level licensed audiologist; and have passed an approved national audiology exam. The school audiologist is knowledgeable about and able to demonstrate the competencies specified below.

An applicant who holds a license to practice in Colorado pursuant to the Audiologist Practice Act (section 12-210-101, et.seq., C.R.S.) or a valid license in another state and able to practice in Colorado pursuant to the Audiology and Speech-Language Pathology Interstate Compact (section 24-60-4101, C.R.S.), and who fulfills the practicum requirement outlined above, satisfies these requirements.

7.01(1) The school audiologist is knowledgeable about the procedures necessary to identify hearing loss in children/students including, but not limited to, the following and is able to:

7.01(1)(a) perform identification audiometric procedures including pure tone audiometric screening, immittance measurements, otoacoustic emissions and other electrophysiological measurements;

7.01(1)(b) establish, administer and coordinate hearing and/or auditory processing disorders (APD) identification programs.;

7.01(1)(c) train and supervise audiology support or other personnel as appropriate to screening for hearing loss and/or APD; and

7.01(1)(d) maintain accurate and accountable records for referral and follow-up of hearing screenings.

- 7.01(2) The school audiologist is knowledgeable about and is able to effectively implement the procedures necessary to assess hearing loss in children/students including but not limited to:
- 7.01(2)(a) performing comprehensive audiologic evaluations including pure tone air and bone conduction measures; speech reception and word recognition measures, such as situational functional hearing measures; immittance measures; otoscopy and other tests including interpretation of electrophysiological measures; and differential determination of auditory disorders and/or APD to determine the range, nature and degree of hearing loss and communication function;
 - 7.01(2)(b) performing comprehensive educationally and developmentally relevant audiologic assessments of children/students ages birth to 21 using bias-free procedures appropriate to receptive and expressive ability and behavioral functioning;
 - 7.01(2)(c) providing recommendations for appropriate medical, educational and community referral for other services as necessary for the identification and management of children/students with hearing loss and/or APD and their families/guardians;
 - 7.01(2)(d) interpreting in writing and verbally audiologic assessment results, functional implications and management recommendations to educational personnel, parents/guardians and other appropriate individuals including physicians and professionals, as part of a multidisciplinary process;
 - 7.01(2)(e) selecting and maintaining audiologic equipment, ensuring it is calibrated in accordance with state standards; and.
 - 7.01(2)(f) providing access to assessment information through interpreters/translators.
- 7.01(3) The school audiologist is knowledgeable about procedures of evaluation and provision of amplification instrumentation to children/students in school and is able to:
- 7.01(3)(a) determine children's/students' needs for and the appropriateness of hearing aids, cochlear implants and other hearing-assistance technology;
 - 7.01(3)(b) perform the appropriate selection, verification and maintenance of hearing- assistance technology, including ear mold impressions and modifications;
 - 7.01(3)(c) evaluate situational functional communication performance to validate amplified or electrically stimulated hearing ability;
 - 7.01(3)(d) plan and implement orientation and education programs to assure realistic expectations and to improve acceptance of, adjustment to and benefit from hearing aids, cochlear implants and hearing-assistance technology;
 - 7.01(3)(e) assess whether hearing aids, cochlear implants and other hearing-assistance technology, as used in school, are functioning properly; and
 - 7.01(3)(f) notify parent/guardian when a repair and/or maintenance of personal hearing-assistance devices is required.
- 7.01(4) The school audiologist is knowledgeable about and able to:
- 7.01(4)(a) identify appropriate intervention methods, necessary levels of service and vocational and work-study programming as part of a multidisciplinary team process that integrates:

- 7.01(4)(a)(i) auditory skill development, aural rehabilitation and listening-device orientation and training;
- 7.01(4)(a)(ii) speech skill development including phonology, voice and rhythm;
- 7.01(4)(a)(iii) visual communication systems and strategies including speech-reading, manual communication and cued speech;
- 7.01(4)(a)(iv) language development, i.e. expressive and receptive oral, signed, cued and/or written language including pragmatics;
- 7.01(4)(a)(v) the selection and use of appropriate instructional materials and media;
- 7.01(4)(a)(vi) the structuring of learning environments including acoustic modifications;
- 7.01(4)(a)(vii) case management and care coordination with family/parent/guardian, school and medical and community services;
- 7.01(4)(a)(viii) habilitative and compensatory skill training to reduce academic deficits related but not limited to reading and writing;
- 7.01(4)(a)(ix) social skills, self-esteem and self-advocacy support and training;
- 7.01(4)(a)(x) the transition between, but not limited to, levels, schools, programs and agencies; and
- 7.01(4)(a)(xi) support for a variety of education options for children/students with hearing loss and/or APD.
- 7.01(4)(b) develop and implement treatment plans that facilitate communication competence and which may include, but need not be limited to, speech-reading, auditory/aural development, communication strategies and visual-communication systems and strategies;
- 7.01(4)(c) provide and/or make recommendations with regard to assistive technology such as, but not limited to, hearing aids and hearing-assistance technology, to include radio/television, telephone, pager and alerting convenience;
- 7.01(4)(d) provide developmentally appropriate aural rehabilitation services including, but not limited to, programming in the child's natural environment, if appropriate, in the areas of speech-reading, listening, communication strategies, use and care of hearing aids, cochlear implants, hearing-assistance technology and self-management of hearing needs;
- 7.01(4)(e) provide information and training to teachers, administrators, children/students, parents/guardians and other appropriate professionals and individuals regarding hearing and auditory development; hearing loss and/or APD and implications for communication, learning, psychosocial development and the setting and meeting of vocational goals; hearing aids, cochlear implants and hearing assistance devices; effective communication strategies; effects of poor classroom acoustics and other environmental barriers to learning; and EHDI (early hearing loss detection and intervention) programs and resources;
- 7.01(4)(f) apply appropriate instructional modifications and classroom accommodations to curricula delivery and academic methodology, materials and facilities; and

- 7.01(4)(g) conduct analyses of classroom acoustics and make recommendations for improvement of the listening environment using principles of classroom acoustics, acoustical measurement and acoustical modifications.
- 7.01(5) The school audiologist is knowledgeable about the parameters of information counseling and advocacy and is able to:
 - 7.01(5)(a) counsel families/guardians and children/students with hearing loss and/or APD to provide emotional support, information about hearing loss and the implications thereof, and strategies to maximize communication, academic success and psycho-social development; 7.01(5)(b) assure that parents/guardians receive comprehensive, unbiased information regarding hearing loss, communication options, educational programming and amplification options, including cochlear implants in cases of severe to profound hearing loss;
 - 7.01(5)(c) demonstrate sensitivity to cultural diversity and other differences in characteristics including those found among individuals and within family/guardian systems and deaf culture; and
 - 7.01(5)(d) demonstrate effective interpersonal communication skills in a variety of settings for a variety of circumstances.
- 7.01(6) The school audiologist is knowledgeable about the parameters associated with hearing conservation and is able to:
 - 7.01(6)(a) develop, implement and/or manage programs for the prevention of hearing loss; and
 - 7.01(6)(b) provide education, when appropriate, as related to and regarding access to hearing protection devices.
- 7.01(7) The school audiologist is knowledgeable about ethical conduct and is able to:
 - 7.01(7)(a) comply with federal and state laws, regulations and policies including local district and school policies and relevant case law regarding referral, assessment, placement, related processes and the delivery of service(s);
 - 7.01(7)(b) effectively articulate the role of the school audiologist as part of the special education team within the learning community;
 - 7.01(7)(c) incorporate knowledge of school systems, multidisciplinary teams and community, national and professional resources into planning;
 - 7.01(7)(d) effectively collaborate with teachers, parents and related personnel in case management with flexibility and in a professional manner;
 - 7.01(7)(e) utilize a range of interpersonal communication skills such as, but not limited to, consultation, collaboration, counseling, listening, interviewing and teaming, as appropriate, in the identification of, prevention of harm to, assessment of and/or intervention with children/students suspected of or identified as having auditory disabilities;
 - 7.01(7)(f) mentor and supervise audiology support personnel so that the auditory needs of children/students are effectively addressed;

7.01(7)(g) maintain accurate records and data relevant to the planning, management and evaluation of programs;

7.01(7)(h) educate other professionals and the community about implications of hearing loss; and

7.01(7)(i) initiate requests or network to acquire support when needed.

7.02 School Occupational Therapist (Ages Birth-21)

To be endorsed as a school occupational therapist, an applicant must hold an earned bachelor's or higher degree in occupational therapy from an American Occupational Therapy Association-accredited program at an accepted institution of higher education;; have successfully completed a practicum or internship, as required by the school of occupational therapy attended, which may be held in a variety of settings; hold a valid license to practice in Colorado pursuant to the Occupational Therapy Practice Act (section 12- 270-107, C.R.S.) or a valid license issued by another state and able to practice in Colorado pursuant to the Occupational Therapy Licensure Compact (section 24-60-4101, C.R.S.) and have passed the occupational therapy national registration examination administered by the national board for certification in occupational therapy. The school occupational therapist is knowledgeable about and is able to demonstrate the competencies specified below:

7.02(1) The school occupational therapist is knowledgeable about the legal framework of occupational therapy within the public school system and is able to:

7.02(1)(a) articulate the letter and intent of federal, special education and state laws and policies related to school-based occupational therapy, including issues related to potential safety and liability; and

7.02(1)(b) articulate to a variety of audiences the role of school-based occupational therapy for ages birth-21 including, but not limited to, the school occupational therapist's contribution to:

7.02(1)(b)(i) students' individualized education plans and programs (IEP) and individualized family service plan (IFSP);

7.02(1)(b)(ii) students' participation within the general education curriculum including, but not limited to, academic, non-academic and extracurricular activities and in the community including, but not limited to, vocational and independent living training; and

7.02(1)(b)(iii) early intervention for children ages birth-2 and preschoolers ages 3-5, including working with families and caregivers and with consideration for natural environments.

7.02(2) The school occupational therapist is knowledgeable about processes for determining eligibility for special education services, the need for related services and the design and implementation of IEPs. The school occupational therapist, working with other educational professionals and interdisciplinary team members, is able to:

7.02(2)(a) consult with team on pre-referral strategies in support of a student's participation and performance within the educational context;

7.02(2)(b) evaluate student eligibility for early intervention or special education services and to make referrals when pre-referral interventions prove ineffective or inadequate;

7.02(2)(c) adhere to all established confidentiality and due process policies and procedures; and

7.02(2)(d) advocate for student access to and participation in the general curriculum and in the least restrictive environment.

7.02(3) The school occupational therapist is knowledgeable about appropriate and accurate assessment of a student's occupational and physical abilities and how to determine the need for adaptive equipment, and is able to:

7.02(3)(a) complete and evaluate observations and/or screenings of a student's strengths, problems and potential issues within the educational setting;

7.02(3)(b) coordinate data-gathering from record reviews, interviews, checklists, specific observations and/or collaboration or consultation to avoid duplication of service(s) and/or assessment(s), including interpretation of medical records and prescriptions as applied to the educational environment;

7.02(3)(c) identify and select appropriate, valid and reliable assessments to measure contextual factors, activity demands and student factors related to academic achievement;

7.02(3)(d) assess a student's occupational performance during activities of daily living including, but not limited to, hygiene, functional mobility, eating, dressing, toileting, communication and meal preparation;

7.02(3)(e) assess a student's performance skills; motor skills including, but not limited to, posture, mobility, coordination, strength and effort, and energy; process skills, including but not limited to, energy, knowledge, temporal organization, organizing space and objects and adaptation; and communication/interaction skills including, but not limited to, body language, information exchange and relations with others;

7.02(3)(f) assess the student's performance context related to cultural, physical, social, personal, temporal and virtual aspects;

7.02(3)(g) assess factors internal to the student including, but not limited to, those physical, cognitive and psycho-social factors that influence development and performance and those which interact with illness, disease and disability;

7.02(3)(h) identify environmental factors that can either support or hinder a student's academic performance;

7.02(3)(i) interpret assessment data to develop and refine hypotheses about the student's academic performance and effectively communicate, both verbally and in writing, assessment results to a variety of audiences including, but not limited to, educators, paraprofessionals, parents and students, as appropriate;

7.02(3)(j) within the context of an IEP or IFSP team, use clinical experience, clinical observation and professional judgment, as well as assessment data to plan and develop appropriate and targeted student objectives to be measured regularly for systematic comparisons of current and past student performance; and

7.02(3)(k) report regular progress in attainment of the student's goals and objectives and make appropriate modifications, as needed, to the student's IEP or IFSP.

7.02(4) The school occupational therapist is knowledgeable about how to promote student engagement in everyday educational occupations and activities and how to support student participation in education and community contexts, and is able to:

- 7.02(4)(a) provide appropriate classroom and environmental modifications and accommodations;
 - 7.02(4)(b) adapt curriculum, curriculum materials and presentation style to the unique fine, visual, sensor and gross motor needs of each student;
 - 7.02(4)(c) integrate appropriate equipment and/or devices, including low and high technology, to facilitate functional and independent skills and minimize deficiencies and increased deformity;
 - 7.02(4)(d) participate in program or curriculum development representing the needs of diverse learners to provide building level interventions, as needed and as appropriate;
 - 7.02(4)(e) identify and utilize intervention approaches based on documented evidence of research-based best practices;and
 - 7.02(4)(f) provide school occupational therapy reports to students and families on a regular basis, coinciding with the school district's progress reporting schedule and format.
- 7.02(5) The school occupational therapist is knowledgeable about how to create, communicate and sustain effective collaborative relationships with relevant individuals, families, schools and communities and is able to:
- 7.02(5)(a) communicate effectively with students, families, teachers and other professionals including, but not limited to, those in the private sector to appropriately plan for meeting a student's needs and to avoid duplication of service(s);
 - 7.02(5)(b) communicate respectfully and sensitively to students and adults;
 - 7.02(5)(c) teach, facilitate, coordinate, schedule and supervise paraprofessionals, other staff members and family members/guardians to ensure that IEPs are effectively implemented;
 - 7.02(5)(d) facilitate and/or assist in transition of students from one setting to another in collaboration with students, their families, other educational staff, support-related professionals and/or community organization representatives, as appropriate;
 - 7.02(5)(e) identify and utilize resources and strategies that promote effective partnerships with individuals, families, school personnel and appropriate community entities; and
 - 7.02(5)(f) demonstrate the skills needed for the design and application of therapeutic strategies based on the defined needs, motivational levels, interests, preferences and individual backgrounds and characteristics of students.
- 7.02(6) The school occupational therapist is knowledgeable about ethical and legal standards of the practice of occupational therapy in the state of Colorado and is able to:
- 7.02(6)(a) address ethical considerations in all student- and occupation-related practices;
 - 7.02(6)(b) recognize cultural and other biases and modify IEPs and IFSPs accordingly;
 - 7.02(6)(c) interpret literature and apply documented, successful, evidence-based research and practice related to school occupational therapy;
 - 7.02(6)(d) deliver occupational therapy services in accordance with the American Occupational Therapy Association's standards and policies and those of the state of Colorado; and

7.02(6)(e) demonstrate compliance with the most current occupational therapy code of ethics for the American Occupational Therapy Association.

7.03 School Orientation and Mobility Specialist (Ages Birth-21)

To be endorsed as a school orientation and mobility specialist, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have successfully completed an approved preparation program for school orientation and mobility specialists; have successfully completed a practicum or internship in a school setting, equivalent to a minimum of 320 hours, full-time, under the supervision of an Academy of Certification of Vision Rehabilitation and Education Professionals (ACVREP)-licensed orientation and mobility specialist; have passed the ACVREP examination and hold a current and valid ACVREP orientation and mobility certificate.

An applicant who holds a valid ACVREP Orientation and Mobility Certificate and who meets the practicum experience requirements specified above satisfies these requirements.

The orientation and mobility specialist must have demonstrated the competencies specified below:

7.03(1) The school orientation and mobility specialist is knowledgeable about the legal framework, historical and auricular foundations and cultural social-economic factors affecting students with visual impairments and other concomitant disabilities, and about systems of orientation and mobility and is able to:

7.03(1)(a) articulate the history and philosophy of instructional practices as related to orientation and mobility instruction for children and youth with visual impairments;

7.03(1)(b) incorporate and address in planning variations in beliefs, traditions and values across cultures and their potential effect on attitudes toward and expectations for individuals with visual impairments;

7.03(1)(c) research, identify and apply for appropriate and relevant federal entitlements that provide specialized equipment and materials for individuals with visual impairments;

7.03(1)(d) communicate effectively with regard to current educational definitions, identification criteria, labeling issues and incidence and prevalence figures for individuals with visual impairments to a variety of audiences, as needed and appropriate;

7.03(1)(e) describe the use of the long cane as a mobility system; the different types of long canes, adapted canes and adaptive mobility devices and their strengths and limitations as travel tools in consideration of individual travel needs and travel environments; and articulate and utilize prescription techniques for canes, adapted canes and adaptive mobility devices;

7.03(1)(f) describe the dog guide as a mobility system; the methods and strategies for providing orientation assistance to a dog guide user; and the process for making referrals to dog guide training centers;

7.03(1)(g) describe the use and application of electronic travel aids (ETAs) as a supplementary mobility system; how ETAs are classified and the basic principles of operating commercially available ETAs;

7.03(1)(h) explain the uses and applications of optical and non-optical devices as a supplementary mobility system; the classification and basic principles of operation of optical and non-optical devices and the various ways in which persons with visual impairments may use these devices in travel environments;

7.03(1)(i) describe the use of ambulatory aids such as, but not limited to, support canes, walkers, crutches and wheelchairs, and the manner in which these devices may be used by individuals who are blind or visually impaired; and

7.03(1)(j) articulate the correlation between and the advantages and disadvantages of mobility systems for persons with a range of visual impairment, including those with concomitant disabilities, and communicate this information effectively to students and their families.

7.03(2) The school orientation and mobility specialist is knowledgeable about human development and the implications of blindness/visual impairment and deaf-blindness upon development, and orientation and mobility skill acquisition. The school orientation and mobility specialist is able to:

7.03(2)(a) explain the structure, function and normal development of the human visual system and the impact on development of other sensory systems when vision is or becomes impaired;

7.03(2)(b) describe and interpret basic terminology, manifestations, movement and travel implications of diseases and disorders of the human visual system;

7.03(2)(c) explain the classification and quantification of hearing loss; the special auditory needs of persons with visual impairments; the use of hearing aids by persons with visual impairments and the uses of audiometric data for traffic interpretation;

7.03(2)(d) describe the role of perception as it pertains to cognition, sensation, attention, memory, cognitive mapping, orientation and the utilization of information as conveyed through sensory means;

7.03(2)(e) articulate the effects of medications on the functioning of the sensory systems and on general mobility;

7.03(2)(f) describe the impact of and needs generated by hearing loss on an individual's modes of communication, movement and travel;

7.03(2)(g) explain the effects of visual impairment, with and without additional disabilities, on early development of motor and cognition abilities, self-esteem, social/emotional interaction, self-help, communication, travel safety and orientation and mobility skill(s) acquisition;

7.03(2)(h) describe the impact of vision loss on the family and the strategies available to family members, caregivers and support systems in encouraging and supporting independence;

7.03(2)(i) describe the similarities and differences between the sensory, cognitive, physical, cultural, social, emotional and travel needs of students with and without visual impairments;

7.03(2)(j) discuss the role and function of incidental learning when vision is impaired as related to concept development and travel skills; and

7.03(2)(k) recommend adaptations across student travel environments that can address and accommodate individual sensory and physical needs.

7.03(3) The school orientation and mobility specialist is knowledgeable about the accurate assessment of students' sensory, developmental and orientation and mobility performance and is able to:

7.03(3)(a) interpret and apply specialized terminology as used in medical diagnoses of eye reports, low vision evaluation reports, orientation and mobility assessment(s) of individuals with visual impairments and those with concomitant disabilities;

7.03(3)(b) articulate the rudimentary practices used for screening hearing function(s) and ensure that hearing is screened prior to assessment of orientation and mobility knowledge and skills;

7.03(3)(c) gather background information and family history relevant to the individual student's visual status and orientation and mobility needs;

7.03(3)(d) utilize in planning data from specific and appropriate orientation and mobility assessments to measure functional vision and orientation and mobility knowledge and skills, including, but not limited to, concept development, sensory-motor function and informal and formal mobility techniques;

7.03(3)(e) address in planning ethical considerations, legal provisions, regulations, policies and guidelines for the valid orientation and mobility assessment of individuals with visual impairments, including those with concomitant disabilities;

7.03(3)(f) adapt and implement a variety of orientation and mobility assessment procedures when evaluating individuals with visual impairments, including those with concomitant disabilities;

7.03(3)(g) incorporate into planning the interpretation and application of assessment results from related professional fields in conjunction with orientation and mobility assessments of individuals with visual impairments, including those with concomitant disabilities;

7.03(3)(h) implement appropriate strategies to assess environments for accessibility and safety;

7.03(3)(i) analyze and utilize assessment information in the development of the individualized family service plans (IFSP) and individualized education programs (IEP) for individuals with visual impairment, including those with concomitant disabilities;

7.03(3)(j) write behaviorally stated goals and objectives that are realistic, measurable, appropriately sequenced and based on assessment findings;

7.03(3)(k) apply strategies and methods for using assessment information to the ongoing evaluation of student progress and implement appropriate program adaptations and remediation strategies, accordingly; and

7.03(3)(l) create and accurately maintain required school records with regard to orientation and mobility assessments for individuals with visual impairments, including those with concomitant disabilities.

7.03(4) The school orientation and mobility specialist is knowledgeable about specialized instruction and appropriate modifications and accommodations for learners with visual impairment and is able to:

7.03(4)(a) establish appropriate and effective communication, interaction and rapport with children/students of all ages and their families or others who may be accountable;

7.03(4)(b) counsel students regarding the setting of high but achievable mobility goals; choosing a mobility system and related matters involving the use of mobility skills in daily living; and recognize and incorporate into planning students' evolving attitudes toward orientation and mobility instruction;

7.03(4)(c) identify resources and/or acquire and utilize and/or design and produce appropriate media and materials that support orientation and mobility instruction including, but not limited to, visual, tactile and auditory maps, models, graphic aids and recorded information;

7.03(4)(d) apply observational techniques appropriate to orientation and mobility instruction;

7.03(4)(e) implement instructional strategies that can enable person(s) with visual impairments to use sensory information in travel environments;

7.03(4)(f) design and implement instructional programs using the optical and non-optical devices recommended by eye care professionals for use in travel environments;

7.03(4)(g) evaluate and select environments for the introduction, development and reinforcement of orientation and mobility knowledge and skills;

7.03(4)(h) demonstrate the construction, assembly and maintenance of the long cane and other adaptive mobility devices; articulate the nomenclature related to the cane and its parts; use appropriate resources for procuring long canes and other devices and demonstrate proficiency in maintaining and repairing canes and other adaptive mobility devices;

7.03(4)(i) provide student instruction and support to address sensory skills, body image concept development, directionality, environmental concepts, address systems, interpretation of traffic patterns and related orientation and mobility concepts;

7.03(4)(j) modify and provide instruction related to techniques of trailing, upper and lower body protection, squaring off, search, room familiarization, use of landmarks and cues, solicitation of assistance and human guides;

7.03(4)(k) modify and provide instruction related to appropriate cane techniques and their applications in indoor and outdoor environments including but not limited to diagonal cane and touch technique; touch technique modifications, including three-point touch, touch and slide, touch and drag; constant contact technique and the use of the cane for shore-lining;

7.03(4)(l) provide instruction on techniques for using adaptive mobility devices in indoor and outdoor environments;

7.03(4)(m) provide instruction with regard to orientation and travel skills including, but not limited to, route planning; direction taking; distance measurement and estimation; utilization of compass directions; recovery techniques; analysis and identification of intersections and traffic patterns; use of traffic control devices; negotiation of public conveyance systems, such as elevators and escalators; techniques for crossing streets; and techniques for travel in indoor, outdoor, residential, small business, business district, mall and rural area environments;

7.03(4)(n) select appropriate distances and positioning relative to the student for safe and effective instruction as the student advances through the orientation and mobility program, which may best facilitate progress as skills relevant to a wide variety and complexity of environments are introduced;

7.03(4)(o) select, design, implement and utilize "drop-off" lessons for the assessment of orientation and mobility skills;

7.03(4)(p) instruct students on how to address travel needs when the distance between the instructor and the student is remote, and develop and facilitate "solo" lessons and independent travel experiences;

7.03(4)(q) articulate the role of regular and special education personnel and related service professionals who may be involved in interdisciplinary, multidisciplinary or trans-disciplinary instruction of the child/student; and

7.03(4)(r) develop appropriate lesson plans and record pertinent anecdotal lesson notes concisely.

7.03(5) The school orientation and mobility specialist is knowledgeable about effective communication and successful collaboration with students, their families and relevant education and community personnel and is able to:

7.03(5)(a) describe and respond to movement and travel-related concerns of parents of individuals with visual impairments with varied and appropriate strategies to assist them in addressing such concerns;

7.03(5)(b) articulate the roles of individuals with visual impairments to parents and other family members, educational service providers and relevant community personnel, in planning for students' individualized orientation and mobility programs;

7.03(5)(c) describe the roles of and be able to provide direction for paraprofessionals or para-educators who assist with the orientation and mobility instruction of students with visual impairments;

7.03(5)(d) utilize appropriate strategies for assisting families and other team members in planning for level-transitioning of students with visual impairments;

7.03(5)(e) provide resources for service, networking and organization specifically oriented to students with visual impairments and deaf-blindness to families, related professionals and other support personnel;

7.03(5)(f) advocate for the necessity of role models for students with visual impairments and deaf-blindness;

7.03(5)(g) utilize appropriate and effective communication, consultation and collaboration skills and strategies in working with students with visual impairment, parents, regular and special education staff and community personnel regarding students' orientation and mobility needs and program(s);

7.03(5)(h) initiate and coordinate respectful and beneficial relationships between and among families and relevant professionals, where appropriate, to encourage and assist families in becoming informed and active participants in students' orientation and mobility programs;

7.03(5)(i) plan and conduct conferences with families or primary caregivers as required and/or necessary; and

7.03(5)(j) manage and direct the activities of para-educators or peer tutors who work with individuals with visual impairments.

7.03(6) The school orientation and mobility specialist is knowledgeable about adhering to ethical and appropriate professional practices in contributing to the orientation and mobility skill development of children/students and is able to:

7.03(6)(a) apply the ethical considerations governing the profession of orientation and mobility to the education of the learner who is visually impaired, recognizing the importance of the orientation and mobility specialist as a role model for students with visual impairment(s);

7.03(6)(b) recognize cultural and other biases to assure that instruction of students is discrimination-free;

7.03(6)(c) articulate and address in planning concerns related to student safety and potential liability and keep current on national and local environmental accessibility standards;

7.03(6)(d) engage in the activities of professional organizations which represent and advocate for the field of visual impairment, whenever relevant;

7.03(6)(e) keep current on literature and documented effective research applicable to individuals with visual impairments and orientation and mobility needs and apply relevant information to planning and objectives setting for students; and

7.03(6)(f) practice professional self-assessment and seek out professional development activities that support the advancement of personal skills and knowledge and which can benefit students with visual impairments, their families and/or colleagues, and to maintain ACVREP certification.

7.04 School Physical Therapist (Ages Birth-21)

To be endorsed as a school physical therapist, an applicant must hold an earned bachelor's or higher degree from an accepted institution of higher education; have completed a physical therapy program accredited by the American Physical Therapy Association's (APTA) Commission on the Accreditation of Physical Therapy Education (CAPTE);; hold a valid license to practice in Colorado pursuant to the Physical Therapists Practice Act (section 12-285-101, et. seq. C.R.S.) or a valid license issued by another state and ale to practice in Colorado pursuant to the Physical Therapy Licensure Compact (section 24-60-3702, C.R.S.) and have demonstrated the competencies specified below:

7.04(1) The school physical therapist is knowledgeable about the legal framework of physical therapy within the public school system and is able to:

7.04(1)(a) articulate the letter and intent of state and federal special education law, rule and policy, including local education agency policy, as related to school-based physical therapy and including, but not limited to, issues related to safety and liability;

7.04(1)(b) describe the etiology of various physical and medical conditions that impact the functional ability of the student within the school, home and community environmentsl

7.04(1)(c) articulate the difference between medically based physical therapy management and general physical therapy management as a related service under IDEA, and adapt physical therapy management strategies from the medical model to the educational model; and

7.04(1)(d) utilize strategies that consider the influence of diversity on assessment, eligibility determination, intervention planning and placement of individuals with exceptional learning needs.

7.04(2) The school physical therapist is knowledgeable about the process of determining eligibility for special education services and/or related services; designing and implementing Individualized Educational Programs (IEPs) and/or Individualized Family Service Plans (IFSPS) and is able to:

7.04(2)(a) implement pre-referral interventions as part of a special education team that supports the student's participation and performance within the educational context;

7.04(2)(b) refer students for special education when the education team determines that pre-referral interventions have been ineffective or inadequate;

7.04(2)(c) participate as needed on an interdisciplinary team to evaluate student eligibility for early intervention or special education services;

7.04(2)(d) adhere to all established confidentiality and due process guidelines and procedures; and

7.04(2)(e) advocate for student access to and participation in the general curriculum and the least restrictive environment.

7.04(3) The school physical therapist is knowledgeable about completing accurate assessments of a student's physical abilities and needs for adaptive equipment, and is able to:

7.04(3)(a) complete and evaluate observations and/or screenings to assess a student's strengths and challenges within the educational setting;

7.04(3)(b) provide gross motor and fine motor screenings to determine if a child is in need of a complete evaluation;

7.04(3)(c) coordinate data-gathering from record reviews, interviews, checklists, specific observations, interpretation of medical records and identification of prescriptions and medications taken, as each applies to the educational environment, and to collaborate or consult with others, when indicated, in order to avoid duplication of services and/or assessment;

7.04(3)(d) identify and select valid and reliable assessment methods to measure contextual factors, activity demands and student factors that may be affecting school performance;

7.04(3)(e) where appropriate, conduct tests and measures of the following areas and evaluate for performance within the educational setting: muscle strength, force, endurance and tone; reflexes and automatic reactions, movement skill and accuracy; joint motion, mobility and stability; sensation and perception; peripheral nerve integrity; locomotor skill, stability and endurance; activities of daily living; cardiac, pulmonary and vascular functions; fit, function and comfort of seating and positioning equipment, prosthetic, orthotic and other assistive devices; posture and body mechanics; limb length, circumference and volume; thoracic excursion and breathing patterns; vital signs and physical home and school environments;

7.04(3)(f) incorporate strategies that consider the influence of diversity on assessment, eligibility, programming and placement of individuals with exceptional learning needs;

7.04(3)(g) identify and address in planning environmental factors that may support or hinder a student's performance;

7.04(3)(h) interpret assessment data to develop and refine hypotheses about the student's performance;

7.04(3)(i) interpret and communicate verbally and in writing the results of the assessment process for a variety of audiences including, but not limited to, teachers, paraprofessionals, related service professionals, students and parents/guardians, as appropriate;

7.04(3)(j) use proven documented evidence of clinical experience, clinical observation, professional judgment, test results and evidence in relevant literature within the context of IEPs or IFSPs to plan and develop appropriate and measurable student-targeted outcomes; and

7.04(3)(k) report progress in the attainment of annual goals and objectives and make appropriate modifications, as needed, to the student's IEP or IFSP.

7.04(4) The school physical therapist is knowledgeable about developing and providing related-service support to special education communities for students with disabilities and is able to:

7.04(4)(a) apply current proven effective practice appearing in the literature related to the practice of physical therapy in the school environment and to the development of strategies that can gain maximum access for and participation in a free and appropriate public education by all students;

- 7.04(4)(b) provide appropriate classroom and environmental modifications and accommodations to facilitate students' ability to receive and participate in an appropriate public education;
 - 7.04(4)(c) reinforce functional behavior(s) as related to the cognitive, communicative, social/emotional and physical needs of students;
 - 7.04(4)(d) integrate appropriate equipment and/or devices including low and high technology to facilitate more functional and independent skills within the educational environment;
 - 7.04(4)(e) identify safety concerns and appropriate interventions for both the student and the provider, in the case of providing physical assistance to the student, to prevent injury;
 - 7.04(4)(f) identify appropriate strategies and interventions to assist the student in obtaining improved functional academic performance through consultation and direct and/or indirect intervention(s);
 - 7.04(4)(g) identify and utilize intervention approaches based on established best practices and documented research-based evidence including remediation and/or appropriate adaptations for positioning needs, and adaptive/assistive equipment needs and/or the need for physical or manual assistance to perform functional life skills within the educational environment, home or community;
 - 7.04(4)(h) provide school physical therapy reports to students and families on a regular basis that coincide with the school district's progress reporting schedule and format; and
 - 7.04(4)(i) directly supervise unlicensed persons at school locations, in accordance with Colorado's Physical Therapy Practice Act, to facilitate a student's ability to participate in the educational process.
- 7.04(5) The school physical therapist is knowledgeable about how to create, communicate in and sustain effective collaborative relationships with relevant individuals, families, schools and communities and is able to:
- 7.04(5)(a) communicate respectfully and sensitively to students and adults;
 - 7.04(5)(b) communicate effectively with students, families, teachers and other professionals including those from the private sector to appropriately plan for a student's services and to avoid duplication of service(s);
 - 7.04(5)(c) communicate with relevant providers and educators about the functional impact of students' disabilities on the ability to perform within the school environment;
 - 7.04(5)(d) identify resources and strategies that promote effective partnerships with individuals, families, school personnel and community representatives;
 - 7.04(5)(e) teach, facilitate, coordinate, schedule and provide supervision to paraprofessionals, other staff members and family members/guardians, as appropriate, to ensure that the IEP and/or IFSP is effectively implemented;
 - 7.04(5)(f) serve as an advocate for student's right to the least restrictive environment in an appropriate public education;
 - 7.04(5)(g) collaborate with colleagues and the school team to establish, write and measure appropriate and relevant student outcomes that are consistent with the functional skills that must

be acquired by students so that they become as independent as possible within the educational environment, at home and/or in the community; and

7.04(5)(h) facilitate and/or assist in the development of the effective transition of students from one setting to another in collaboration with the students, their families/guardians or other professionals including community representatives to promote a continued level of functional performance at the new setting.

7.04(6) The school physical therapist is knowledgeable about the ethical and legal standards of physical therapy practice in the state of Colorado and is able to:

7.04(6)(a) recognize and address in planning the effect of cultural bias on practice;

7.04(6)(b) evaluate and apply current effective evidence-based practice related to school physical therapy;

7.04(6)(c) practice within the ethical and legal standards of the practice of physical therapy according to Colorado's Physical Therapy Practice Act and the American Physical Therapy Association's standards and policies, and demonstrate compliance with the most current physical therapy code of ethics of the American Physical Therapy Association; and

7.04(6)(d) routinely evaluate and measure personal performance as a physical therapist to ensure therapeutic efficacy and achievement of appropriate outcomes, and participate in professional development and professional organizations which lead to increased knowledge and growth in skills and abilities.

7.05 School Nurse (Ages Birth–21)

To be endorsed as a school nurse, an applicant must hold an earned associate's, bachelor's or higher degree in nursing from an accepted institution of higher education or one recognized by the U.S. Secretary of Education as a specialized accrediting agency; and hold a valid RN license to practice professional nursing in Colorado pursuant to the Nurse Practice Act (section 12-38-101, et. seq., C.R.S.) or a valid multi-state license and able to practice in Colorado pursuant to the Nurse Licensure Compact (section 24-60-3202, C.R.S.).

The initially licensed school nurse must participate in an approved induction program that will enable the nurse to be knowledgeable about and able to demonstrate the competencies specified below, which have been endorsed by the American Nurses' Association and the National Association of School Nurses as standards of care and the standards of professional performance for school nurses.

7.05(1) The school nurse is knowledgeable about the standards of care of school nursing practice and is able to:

7.05(1)(a) assess student health status using data collected from the student, parent, school staff and other relevant health care providers;

7.05(1)(b) conduct basic screening programs to identify potential health issues that may affect a child's ability to learn;

7.05(1)(c) conduct physical assessments and specific screening tests, counseling and conferencing to determine the physical, social and mental status of the student; and

7.05(1)(d) assess the school environment and program(s) to determine modifications that are necessary to address student health and safety needs.

7.05(2) The school nurse has the knowledge to make nursing diagnoses and is able to:

7.05(2)(a) validate student, family and group assessment data;

7.05(2)(b) interpret health history information, medical reports, nursing observations and test results using educational terminology; and

7.05(2)(c) establish student and school health care priorities.

7.05(3) The school nurse has the knowledge of how to set health priorities in the school setting and is able to:

7.05(3)(a) evaluate health outcomes of school environment and program changes and create situation-specific methods of results-measurement;

7.05(3)(b) assess the cultural health beliefs of students to determine the impact on health care delivery, health care compliance and on education in the classroom; and

7.05(3)(c) identify resources needed to achieve objectives and establish time frames and criteria to measure results.

7.05(4) The school nurse is knowledgeable about planning and is able to:

7.05(4)(a) review assessment information and relate findings to functioning levels and needs of students within the school setting;

7.05(4)(b) develop a school health care plan to meet students' individual health needs within the school setting;

7.05(4)(c) develop a plan to promote health and wellness and reduce risk factors within the school setting; and

7.05(4)(d) collaborate with school personnel, community professionals and other resources to plan health-related and informational activities for students, educational staff and relevant others.

7.05(5) The school nurse is knowledgeable about plan implementation and is able to:

7.05(5)(a) manage health care plans for students with identified special health needs within the school setting;

7.05(5)(b) provide direct delivery of health services for students, when and if appropriate;

7.05(5)(c) delegate to, train and supervise appropriate school personnel to implement specific health care procedures;

7.05(5)(d) help clients to obtain resources and services;

7.05(5)(e) adhere to professional standards and state regulations; and

7.05(5)(f) coordinate care to meet the health needs of students, their families and related vulnerable populations.

7.05(6) The school nurse is knowledgeable about evaluation for purposes of plan updating and is able to:

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- 7.05(6)(a) monitor progress toward meeting student health care plan outcomes and revise plans as needed to meet identified ongoing or emerging needs of the student;
- 7.05(6)(b) evaluate school or district health care policies and procedures, counseling and classroom teaching outcomes;
- 7.05(6)(c) evaluate health care delivery models; and
- 7.05(6)(d) monitor health outcomes of school environment and program changes.
- 7.05(7) The school nurse is knowledgeable about what constitutes quality of care and is able to:
- 7.05(7)(a) develop recommendations to enhance the school environment and/or to modify a school program to meet student health and safety needs;
- 7.05(7)(b) evaluate school staff trained to carry out designated health care procedures; and
- 7.05(7)(c) participate in quality assurance activities, such as the development of relevant policies and procedures.
- 7.05(8) The school nurse is knowledgeable about performance appraisal and is able to:
- 7.05(8)(a) effectively appraise performance through constructive comments from peers and supervisors, self-assessment and adherence to relevant regulations; and
- 7.05(8)(b) develop personal goals for professional development.
- 7.05(9) The school nurse is knowledgeable about professional development and participates in relevant continuing education programs.
- 7.05(10) The school nurse is knowledgeable about the necessity for collegiality in the school setting to meet the health needs of students and relevant needs of their families related to student achievement, and is able to:
- 7.05(10)(a) collaborate with school personnel, students, parents, primary health care providers and relevant others to establish an effective reciprocal referral system;
- 7.05(10)(b) participate as a member of an interdisciplinary school health and/or relevant education team to positively affect student well-being; and
- 7.05(10)(c) participate in appropriate and relevant professional and community organizations.
- 7.05(11) The school nurse is knowledgeable about the ethics of the profession and is able to:
- 7.05(11)(a) demonstrate through application an understanding and incorporation of professional standards and state regulations in an education and/or health care setting;
- 7.05(11)(b) recognize the need for and maintain confidentiality; and
- 7.05(11)(c) recognize and demonstrate respect for students' and families' cultural health care beliefs and student and family autonomy and rights.
- 7.05(12) The school nurse is knowledgeable about the positive aspects of collaboration and is able to:
- 7.05(12)(a) articulate clearly the value and role of the nurse in the school setting;
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7.05(12)(b) work within the organizational structures that influence the delivery of school health services and be an advocate for the health and well-being of students within the school setting; and

7.05(12)(c) act as liaison between school, community health agencies, care providers, parents and students to meet the objectives of student health care plans.

7.05(13) The school nurse is knowledgeable about applicable research and is able to:

7.05(13)(a) base practice on current knowledge, theory and research on which there is documented evidence of effectiveness; and

7.05(13)(b) participate in ongoing relevant research activities.

7.05(14) The school nurse is knowledgeable about resource utilization and is able to:

7.05(14)(a) assess the economic, legal and political factors that influence health care delivery in schools and communities and constructively address applicable factors within the school setting; and

7.05(14)(b) collaborate with community agencies to reduce duplication and expand resources.

7.05(15) The school nurse is knowledgeable about communication, including non-verbal communication, and its effect, and is able to:

7.05(15)(a) articulate issues clearly to a wide variety of audiences in a wide variety of situations and settings;

7.05(15)(b) interpret health history information, medical reports, nursing observations and test results, and communicate clearly to appropriate staff and/or students and/or their families;

7.05(15)(c) document interventions accurately in a timely way and in a retrievable and understandable format; and

7.05(15)(d) effectively use technology to acquire up-to-date information and to expand skills and resources.

7.05(16) The school nurse is knowledgeable about program management and is able to:

7.05(16)(a) develop effective community partnerships and a wide range of accessible resources;

7.05(16)(b) design disease prevention and health promotion strategies and programs for students, their families, when appropriate, and other relevant staff;

7.05(16)(c) implement and oversee recommended modifications of the school environment and programs to meet identified student health and safety needs and to reduce injuries;

7.05(16)(d) provide health consultation, health education and health promotion for students, families, where appropriate, and staff to improve school attendance;

7.05(16)(e) advise and consult with other relevant health care providers as appropriate to address the needs of students within the school setting; and

7.05(16)(f) evaluate health care delivery models and apply relevant elements within the school setting.

7.05(17) The school nurse is knowledgeable about of health education and is able to:

7.05(17)(a) develop and effectively implement lesson plans pertinent to identified health education needs;

7.05(17)(b) assess student and staff education needs for relevant health information and provide staff with health education programs, information, resources and materials, developmentally appropriate for the student population being served, to promote health/wellness and to prevent illness and injury; and

7.05(17)(c) inform students and parents of patient rights.

7.05(18) The school nurse shall self-assess the effectiveness of practice, direction and/or supervision based on the well-being, needs and achievement of students and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.

7.06 School Psychologist (Ages Birth-21)

To be endorsed as a school psychologist, an applicant must have: completed an approved specialist-level (Ed.S.) program with a minimum of 60 graduate semester hours or a doctoral program for the preparation of school psychologists serving children/students ages 0-21 at an accepted institution of higher education; have successfully completed practicums (consisting of a sequence of closely supervised on-campus or field-based activities, designed to develop and evaluate a candidate's mastery of distinct professional skills, consistent with program and/or course goals); have successfully completed an internship (consisting of a full-time experience over one year or half-time over two consecutive years, with a minimum of 1,200 clock-hours, of which at least 600 must be in a school setting and which requires a candidate to demonstrate, under supervision, the ability to provide a wide range of outcome-based school psychological services, and 600 hours in other acceptable internship experiences including private, state-approved education programs or other appropriate mental health or education-related programs); and have passed the state-approved content exam.

An applicant who holds a valid National Certified School Psychologist (NCSP) credential satisfies these requirements. An applicant who holds a valid license to practice in Colorado pursuant to Part Three of the Mental Health Act (section 12-245-301, et.seq., C.R.S.) or a valid license issued by another state and able to practice in Colorado pursuant to the Psychology Interjurisdictional Compact (section 24-60-3902, et.seq., C.R.S.), or is eligible to sit for licensure examinations to obtain these credentials, may provide an institutional recommendation from an approved school psychology program verifying the applicant's acquisition of the competencies listed in these rules, including completion of an appropriate internship and a passing score on the state-approved content exam, to satisfy these requirements.

7.06(1) The school psychologist is knowledgeable about human learning processes from infancy to young adulthood, techniques to assess these processes, and direct and indirect services applicable to the development of cognitive and academic skills; and is able to:

7.06(1)(a) apply learning, motivation and developmental theories to improve learning and achievement for all children/student;

7.06(1)(b) utilize developmentally appropriate practices that support the education of children/students ages birth-21 with disabilities or delays in development;

7.06(1)(c) use results from ongoing assessment(s) in the development of appropriate cognitive and academic goals for children/students with differing abilities, disabilities, strengths and needs.;

- 7.06(1)(d) implement interventions such as consultation, behavioral assessment/intervention and counseling to achieve student goals.; and
- 7.06(1)(e) evaluate the effectiveness of interventions and modify as necessary and appropriate.
- 7.06(2) The school psychologist is knowledgeable about a wide variety of models and methods of informal and formal assessment across ages birth-21 that can identify strengths and needs, and measure progress and functioning, in school, home and community environments, and is able to:
 - 7.06(2)(a) select evaluation methods and instruments that are most appropriate and based upon effective up-to-date measurement theory and research.;
 - 7.06(2)(b) implement a systematic process to collect data including, but not limited to, test administration; interviews and observations; behavioral, curriculum- and play- based assessments and ecological or environmental evaluations.
 - 7.06(2)(c) translate assessment results into empirically based decisions about service delivery to promote child/student achievement.
 - 7.06(2)(d) evaluate the outcomes of programs and services incorporating appropriate and relevant research design, statistics and methodology.
- 7.06(3) The school psychologist is knowledgeable about typical and atypical human developmental processes from birth to adulthood; the techniques to assess these processes; and the application of direct and indirect services for individuals, groups and families and, in collaboration with others, is able to:
 - 7.06(3)(a) develop appropriate behavioral, affective, adaptive, social and transition goals for students of varying abilities, disabilities, strengths and needs.
 - 7.06(3)(b) implement interventions and services including, but not limited to, consultation, behavioral assessment and intervention, counseling and interagency collaboration based on identified goals; and
 - 7.06(3)(c) evaluate the intervention(s) and modify as needed and appropriate to increase and assure effectiveness.
- 7.06(4) The school psychologist is knowledgeable about individual diversity, abilities and disabilities, and the influence of social, cultural, ethnic, socio-economic, gender-related and linguistic factors on development, learning and behavior, and is able to:
 - 7.06(4)(a) identify biological, cognitive, affective, developmental, social and cultural bases that contribute to individual differences.;
 - 7.06(4)(b) identify risk and resiliency factors;
 - 7.06(4)(c) recognize psychopathology and articulate its potential influence on school functioning;
 - 7.06(4)(d) demonstrate the sensitivity, skills and respect necessary to work with diverse types of individuals and families;
 - 7.06(4)(e) display respect for diversity in social and cultural backgrounds and linguistic differences when working with families, school personnel and community agencies; and

- 7.06(4)(f) select and/or adapt prevention and intervention strategies based on individual characteristics, strengths and needs to improve learning, achievement and adaptive functioning for all children/students.
- 7.06(5) The school psychologist is knowledgeable about general education, special education, other educational and related services, the importance of multiple systems and their interactions, and organizational practices that maximize learning, and is able to:
 - 7.06(5)(a) develop and implement policies and practices that create and maintain safe, supportive and effective learning environments.;
 - 7.06(5)(b) participate in and facilitate school reform efforts; and
 - 7.06(5)(c) translate federal and state law, state rules and regulations and local policy into building- and district-level practice.
- 7.06(6) The school psychologist is knowledgeable about models of effective evidence-based programs as related to health promotion; school safety; and primary, secondary and tertiary intervention, and is able to:
 - 7.06(6)(a) implement school-wide prevention and intervention programs which may include, but are not limited to, individual and group counseling, affective education and positive behavior interventions and supports to promote the mental health, physical well-being and the achievement of children/students of all ages;
 - 7.06(6)(b) participate in risk assessments and crisis response planning, to promote and maintain school safety; and
 - 7.06(6)(c) respond effectively to crisis situations.
- 7.06(7) The school psychologist is knowledgeable about collaboration and consultation models and methods and their applications in school, family and community systems, and is able to:
 - 7.06(7)(a) consult and collaborate effectively with children/students, school personnel, families and community professionals to promote and provide comprehensive services to children and families and to advance student achievement;
 - 7.06(7)(b) communicate information that is readily understandable to students, families, educators and community members during meetings, in-services and consultations;
 - 7.06(7)(c) promote family involvement in education and service delivery;
 - 7.06(7)(d) collaborate with families and other service providers to meet the needs of infants, toddlers and preschoolers in home and community settings and
 - 7.06(7)(e) link community resources that serve infants, toddlers, children, adolescents, young adults and their families and facilitate children's/students' transitions across various service delivery systems.
- 7.06(8) The school psychologist is knowledgeable about the history and foundations of school psychology, standards for legal and ethical practice, evidence-based service models and methods and public policy, and is able to:
 - 7.06(8)(a) demonstrate professional leadership that exemplifies a personal and professional commitment to ethical, professional and legal standards;

- 7.06(8)(b) practice in accordance with all applicable federal and state statutes, rules, regulations and local policies, especially those concerning due process, informed consent, privacy rights and confidentiality;
 - 7.06(8)(c) integrate information sources and current technology to enhance quality of service;
 - 7.06(8)(d) utilize data-based decision-making in all aspects of professional practice;
 - 7.06(8)(d) maintain professional preparation, development and supervision as related to the population served; and
 - 7.06(8)(e) contribute professionally to the advancement of school psychology.
- 7.06(9) The school psychologist shall self-assess the effectiveness of practice, direction and/or supervision based on the well-being and achievement of students and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.

7.07 School Social Worker (Ages Birth-21)

To be endorsed as a school social worker, the candidate must hold an earned master's or higher degree in social work from an accepted institution of higher education; including a supervised, 900 clock-hour practicum in the field of social work, which must have been completed in a school, social service agency, mental health clinic or facility and/or hospital setting and which should enable the social worker to synthesize and apply a broad range of relevant knowledge and skills, include opportunities to analyze, intervene and evaluate in ways that are highly differentiated, discriminating and self-critical, and differentially refine the candidate's communication skills with a variety of client populations, colleagues and members of the community; have successfully completed at least 200 hours working with school-age children/students; and have documented evidence of completion of coursework in the areas of school and special education law, including content covering functional behavior assessment and the development of behavior intervention plans.

An applicant who holds valid Certified School Social Work Specialist (C-SSWS) certification from the National Association of Social Workers satisfies these requirements. An applicant who holds a license to practice in Colorado pursuant to Part Four of the Mental Health Practice Act (12-245-401, et. seq., C.R.S.) may meet endorsement requirements upon completion of coursework in school and special education law, functional behavior assessments and the development of behavior intervention plans.

- 7.07(1) The school social worker is knowledgeable about the history and foundations of school social work; standards for legal and ethical practice; proven-effective evidenced-based models and methods and public policy; and is able to:
- 7.07(1)(a) demonstrate professional leadership and ethical practice in accordance with federal, state and local legislation, regulations and policies;
 - 7.07(1)(b) demonstrate personal and professional commitment to the values and ethics of the social work profession through application of the national association of social workers professional standards and code of ethics in ethical decision-making;
 - 7.07(1)(c) remain current regarding effective evidence-based practice;
 - 7.07(1)(d) apply federal, state and local legislation, regulations and policies to ethical and legal interventions;

- 7.07(1)(e) establish priorities and models for the delivery of school social work services that include individual and group counseling, advocacy, case management, consultation and crisis intervention to meet the needs of all learners;
 - 7.07(1)(f) conduct in-services for faculty and staff on child protection and school attendance issues and develop other training and educational programs in collaboration with local community agencies and other pertinent entities in support of the goals and mission of the educational institution;
 - 7.07(1)(g) counsel parents and students about due process rights, as mandated by special education legislation, and advise school personnel so that they are knowledgeable about and able to meet their legal responsibilities to all students; and
 - 7.07(1)(h) comply with the legal mandates of confidentiality and maintain adequate safeguards to protect the privacy and confidentiality of student and family information.
- 7.07(2) The school social worker is knowledgeable about systems change and is able to:
- 7.07(2)(a) acquire or gain access to resources which can eliminate service deficiencies in the local education agency or in the community which negatively affect the ability of children/students to benefit from the educational system;
 - 7.07(2)(b) identify and collaborate with individuals who function as formal or informal leaders in their communities to develop and enhance networks that can complement the services of the local education and community agencies;
 - 7.07(2)(c) identify areas of need not being addressed by the local education agency and community and work to initiate those services;
 - 7.07(2)(d) document problems and recommend solutions to appropriate decision-makers in the local education agency or community;
 - 7.07(2)(e) advocate for appropriate change among educators, other professionals and citizens and provide leadership on committees and advisory boards at local, state, regional and national level to assure that the needs of all learners are met;
 - 7.07(2)(f) use mediation and conflict-resolution strategies to resolve children's/students' educational and parental concerns; and
 - 7.07(2)(g) document the need and advocate for policy change at the local, state, regional and national level that can empower children/students and their families to gain access to and effectively use formal and informal community resources.
- 7.07(3) The school social worker is knowledgeable about communication, consultation and collaboration and is able to:
- 7.07(3)(a) act as a consultant to personnel and others in the local education agency, including members of school boards and representatives of the community, to promote understanding and effective utilization of school social work services;
 - 7.07(3)(b) act as a consultant to teachers, parents and others to facilitate understanding of how factors in the home, local education agency and community affect children's/students' educational experience(s);

- 7.07(3)(c) act as a consultant on policy matters including but not limited to such issues as, discipline, suspension, expulsion, attendance, confidentiality, multicultural factors and child abuse and neglect;
 - 7.07(3)(d) work collaboratively to develop cooperative service arrangements and to mobilize the resources of local education agencies and the community to meet the needs of children/students and families, and to serve as liaison between parents, community and school(s);
 - 7.07(3)(e) as an effective member of an interdisciplinary team, bring unique skills, abilities and a systems perspective to the assessment and diagnosis of children's/students' needs;
 - 7.07(3)(f) initiate and support activities that can assist in overcoming institutional barriers and gaps in service;
 - 7.07(3)(g) demonstrate the professional skills, values and abilities necessary to facilitate the meeting of the objectives set by the interdisciplinary team to ensure student success;
 - 7.07(3)(h) provide appropriate case planning and management services and coordinate service planning with school and/or district and community personnel;
 - 7.07(3)(i) through modeling and coaching teach individuals to be effective group members, in therapeutic groups or in task-oriented work groups; and
 - 7.07(3)(j) effectively advocate for children/students and their families in a variety of circumstances which may have a negative effect on learning including, but not limited to, those related to suspension and expulsion, discrimination, immigration, homelessness, chronic, acute and communicative diseases and other health issues; substance abuse and other at-risk conditions.
- 7.07(4) The school social worker is knowledgeable about educational planning and is able to:
- 7.07(4)(a) ensure that children's/students' educational plans are based on assessments relevant to the concerns raised in the referral and include goals, objectives and interventions to achieve desired outcomes, methods of evaluation and outcome criteria;
 - 7.07(4)(b) ensure that plans are designed to enhance children's/students' positive educational experiences and involve the family, other team members and school and community resources, as appropriate;
 - 7.07(4)(c) provide services to children/students that build on individual strengths and maximize opportunities to participate in the planning process and in directing the learning experience;
 - 7.07(4)(d) develop and implement an intervention plan or, when the most suitable types of intervention are not available, design an alternative plan intended to enhance children's/students' ability to benefit from their educational experience;
 - 7.07(4)(e) conduct culturally sensitive assessments and participate in IEP planning for and service delivery to all learners; and
 - 7.07(4)(f) incorporate into the educational planning process appropriate curricula and approaches to teaching and learning acceptable in the context of the local education agency.
- 7.07(5) The school social worker is knowledgeable about prevention and intervention and is able to:

- 7.07(5)(a) use basic helping skills including, but not limited to, interviewing, questioning and counseling to assist children/students and/or families in addressing problems they are experiencing with social functioning and the effects of such actions on student achievement, by working with them to develop alternative strategies based on clearly defined, evidence-based treatment modes or models;
 - 7.07(5)(b) counsel students and parents about actions which interfere with effective education and student achievement;
 - 7.07(5)(c) conduct small group activities which can serve as environments for teaching children/students effective daily living skills and as conduits for communicating information intended to enhance social functioning or the facilitation of problem resolution;
 - 7.07(5)(d) conduct classroom programs, when indicated, that can provide students with affective knowledge and skills;
 - 7.07(5)(e) conduct parent groups, as appropriate and indicated, relevant to their support of student achievement;
 - 7.07(5)(f) implement appropriate school intervention and prevention programs in response to demonstrated need to ensure a safe and civil learning environment for all students, which may include, but need not be limited to, crisis intervention, conflict resolution and substance abuse prevention;
 - 7.07(5)(g) complete in-depth psychosocial assessments of children/students and of family functioning as related to planning for the improvement of student achievement;
 - 7.07(5)(h) develop measurable and appropriate behavioral, affective, adaptive, social and academic objectives for students with varying abilities, disabilities, strengths and needs;
 - 7.07(5)(i) treat those in need or in crisis situations with respect, empathy, dignity and a consistently positive approach to problem resolution; and
 - 7.07(5)(j) utilize family strengths and structure(s) to enable families to function as advocates for themselves and for their children's education and well-being.
- 7.07(6) The school social worker is knowledgeable about social and cultural foundations and is able to:
- 7.07(6)(a) apply proven theories of human growth and development related to students, ages birth-21 including, but not limited to, learning systems, communications, social learning and behavioral theory in working with children/students;
 - 7.07(6)(b) incorporate diversity factors and the special educational needs of culturally and linguistically different populations into the planning process for students;
 - 7.07(6)(c) ensure that children and their families are provided services within the context of multicultural understanding and with consideration given to addressing the sensitivities that enhance families' support of children's learning experiences;
 - 7.07(6)(d) conduct culturally sensitive assessments of problem learning areas and recommend interventions to meet needs and to promote student achievement;
 - 7.07(6)(e) demonstrate the ability to select and/or adapt strategies based on the needs of at-risk children/students and those with identified disabilities;

- 7.07(6)(f) address in planning biological and environmental factors which affect children's/students' ability to function effectively and to achieve in school;
 - 7.07(6)(g) identify racial and ethnic barriers within the local education agency and develop strategies to lessen and overcome the negative effects of such barriers on children/students and on the learning climate of the local education agency; and
 - 7.07(6)(h) create opportunities for students and staff to recognize diversity in positive ways and to facilitate the understanding and acceptance of cultural and other influencing differences.
- 7.07(7) The school social worker is knowledgeable about assessment and is able to:
- 7.07(7)(a) assist local education agencies in the identification of students needing specialized and or support services;
 - 7.07(7)(b) perform need-assessments as the foundation of effective program planning for children/students and families that include, but are not limited to:
 - 7.07(7)(b)(i) a study of bio-psychosocial factors that may interfere with the children's/students' adjustment to and performance in school and which may involve assessment(s) of the student's physical, cognitive and emotional development and adaptive behavior as manifested in the family's related history;
 - 7.07(7)(b)(ii) assessment of the student's behavior and attitudes in a variety of settings;
 - 7.07(7)(b)(iii) assessment of the patterns of the child's/student's interpersonal relationships as observed in the family, local education agency and community settings;
 - 7.07(7)(b)(iv) assessment of the aspects of the biological, medical, psychological, cultural, sociological, emotional, legal and environmental factors that affect reports on the student's behavior by teachers and other personnel in their roles with/within the local education agency;
 - 7.07(7)(b)(v) identification of formal and informal policies of the local education agency and other institutional factors that may affect the student's behavior;
 - 7.07(7)(b)(vi) assessment of patterns of achievement and adjustment at critical points in the child's/student's growth and development; and
 - 7.07(7)(b)(vii) assessment of the existence of, accessibility to and utilization of community resources for children/students and families.
 - 7.07(7)(c) incorporate students' needs-assessment information into and write a comprehensive, timely and appropriate social-developmental history;
 - 7.07(7)(d) utilize appropriately administered formal and informal objective measures including but not limited to measures of adaptive and functional behavior, self-esteem, social skills, attitudes, emotional health and interests; and
 - 7.07(7)(e) consider placement and service options for students in a variety of contexts.
- 7.07(8) The school social worker is knowledgeable about current effective research and program evaluation and is able to:

- 7.07(8)(a) maintain accurate data and records relevant to the planning, management and evaluation of the school social work program;
- 7.07(8)(b) maintain ongoing assessments of evidenced-based, educationally related social programs implemented in the local education agency, related community and in the region, which address such issues as, but not limited to, students dropping out of school or having poor attendance, advocate for program changes to address such issues and participate in program development and implementation processes, as appropriate;
- 7.07(8)(c) engage in critical self-evaluation to assess efficacy and to improve skills and service delivery;
- 7.07(8)(d) collect, analyze and publish data and present technical information to a variety of audiences and in a variety of contexts, including the general public, public officials, elected and appointed, and/or other decision-makers and policymakers responsible for programs and for program changes that can effect public education and related child welfare matters;
- 7.07(8)(e) assume responsibility for continuing to develop a knowledge base and the skills necessary to remain current in the field and to develop and gain access to support systems that enhance personal growth and professional identity; and
- 7.07(8)(f) participate in professional and community organizations as relevant and appropriate.

7.08 School Speech-Language Pathologist (Ages Birth-21)

To be endorsed as a school speech-language pathologist, an applicant must hold an earned master's or higher degree in communication disorders or speech-language pathology from an American Speech-Language-Hearing Association-approved Council on Academic Accreditation-accredited program at an accepted institution of higher education; have passed the state-approved speech-language pathologist test; have successfully completed a practicum or internship with children/students ages birth-21 in a school setting, equivalent to a minimum of eight weeks full-time, under the supervision of a professionally licensed school speech-language pathologist; and must demonstrate the competencies specified below.

An applicant who holds valid ASHA Clinical Certification of Competence, a valid license to practice in Colorado pursuant to the Speech-language Pathology Practice Act (section 12-305-101, et. seq., C.R.S.) or a valid license issued by another state and able to practice in Colorado pursuant to the Audiology and Speech-language Pathology Interstate Compact (section 24-60-4202, C.R.S.), and who also meets the practicum experience requirement above, satisfies these requirements.

7.08(1) The school speech-language pathologist is knowledgeable about basic human communication, including swallowing processes, and biological, neurological, acoustic, psychological, developmental, linguistic and cultural bases, and must incorporate into planning for students:

- 7.08(1)(a) the analysis, synthesis and evaluation of information related to basic human communication and its processes;
- 7.08(1)(b) utilization of knowledge about normal development in the identification of delayed/disordered speech and language skills' and
- 7.08(1)(c) information about the interrelated and interdependent components of communication as related to its impact on the learner across environments.

7.08(2) The school speech-language pathologist is knowledgeable about the principles and methods of prevention of communication and swallowing disorders for students (ages birth-21), including

consideration of anatomical/physiological, psychological, developmental, and linguistic and cultural correlates of the disorders, and is able to:

7.08(2)(a) analyze, synthesize and evaluate the nature of speech, language, hearing and communication disorders, including swallowing disorders, and other differences including, but not limited to:

7.08(2)(a)(i) the etiologies, characteristics and anatomical/physiological, acoustic, psychological, developmental and linguistic and cultural correlates, in each of the following:

7.08(2)(a)(i)(A) articulation, fluency, and voice and resonance, including respiration and phonation;

7.08(2)(a)(i)(B) receptive and expressive language including, but not limited to, phonology, morphology, syntax, semantics, and pragmatics, in speaking, listening, reading, writing and manual modalities;

7.08(2)(a)(i)(C) hearing including its impact on speech and language;

7.08(2)(a)(i)(D) swallowing including oral, pharyngeal, esophageal and related functions, and the oral function of feeding;

7.08(2)(a)(i)(E) cognitive aspects of communication, such as attention, memory, sequencing, problem-solving and executive functioning;

7.08(2)(a)(i)(F) the social aspects of communication, such as challenging behavior, ineffective social skills and lack of communication opportunities; and

7.08(2)(a)(i)(G) communication modalities, such as oral, written, manual, augmentative and alternative communication techniques and assistive technologies.

7.08(2)(b) articulate to a variety of stakeholders the role of oral language as a precursor to research-based literacy development, including information related to reciprocal spoken/written language relationships, and reading and writing as acts of communication and as tools of learning;

7.08(2)(c) differentiate between classroom oral language content, form and use, and conversational language;

7.08(2)(d) identify traits of typical reading and writing development in the context of the general education curriculum;

7.08(2)(e) act as a resource to schools, parents and the community regarding all aspects of communication;

7.08(2)(f) model and articulate the overall importance of communication and its relationship to academic achievement;

7.08(2)(g) collaborate with other professionals to identify risk factors related to communication development among students ages birth-21;

7.08(2)(h) conduct screening, prevention and intervention procedures;

7.08(2)(i) identify and monitor added literacy risks for students being treated for spoken language difficulties; and

7.08(2)(j) monitor classroom progress and other factors that justify formal referral for assessment.

7.08(3) The school speech-language pathologist is knowledgeable about principles and methods of evaluation of communication and communication disorders for students ages birth-21, and is able to:

7.08(3)(a) participate on child study teams as an active member of the decision-making process for special education referrals;

7.08(3)(b) collaborate with assessment teams in the utilization of a broad repertoire of formal and informal assessment strategies to help identify students' strengths and challenges with the various aspects of communication;

7.08(3)(c) evaluate the psychometric characteristics of formal and informal assessment instruments;

7.08(3)(d) select developmentally, culturally and linguistically appropriate formal and informal assessment tools and procedures to identify needs of students suspected of having difficulties in communication;

7.08(3)(e) analyze assessment data to determine students' specific communication needs and eligibility for services, and for incorporation into individual educational plans (IEPs);

7.08(3)(f) interpret data clearly in verbal and written form for a wide range of audiences, including educators, related professionals, families and students, where appropriate;

7.08(3)(g) integrate assessment information from other professionals in the eligibility decision-making process;

7.08(3)(h) consult with government agencies, teachers, school administrators and other health professionals on indications, timing, need and use of diagnostic assessments; and

7.08(3)(i) collaborate with assessment teams regarding evaluation strategies to identify whether a language difference or disorder might be at the root of concerns related to difficulty in a student's acquisition of literacy and/or any of its essential skills.

7.08(4) The school speech-language pathologist is knowledgeable about evidence-based and best-practice techniques, procedures and tools for intervention and remediation of communication disorders, including augmentative/alternative/assistive technology, and is able to:

7.08(4)(a) plan and implement an appropriate service-delivery model for each identified student based on assessment results;

7.08(4)(b) comply with federal, state and local laws, rules, policies, guidelines procedures and relevant case law;

7.08(4)(c) model and demonstrate the use of augmentative/alternative/assistive technology;

7.08(4)(d) be accountable through the collection of timely and appropriate data and the maintaining of accurate and timely records;

7.08(4)(e) identify and gain access to sources of, and synthesize and translate common principles of, research and documented evidence-based and proven best practices related to the planning for and the implementation of intervention plans and strategies;

7.08(4)(f) implement current state-of-the-art technology to maximize students' communication skills;

7.08(4)(g) adapt general and special education curriculum to meet the requirements of individual students with regard to Colorado Academic Standards and access skills;

7.08(4)(h) work collaboratively with students, general education teachers, school personnel, families and the community to provide integrated communication services;

7.08(4)(i) provide culturally and developmentally appropriate curriculum-relevant intervention based on identified needs and proven effective research and practice;

7.08(4)(j) develop setting-appropriate intervention plans with measurable and achievable goals to meet identified students' need(s); and

7.08(4)(k) maintain a safe and effective learning environment conducive to student achievement.

7.08(5) The school speech-language pathologist is knowledgeable about ethical conduct and professional development and is able to:

7.08(5)(a) articulate the role of the speech-language pathologist as an integral part of the special education services team and the learning community;

7.08(5)(b) collaborate with teachers, parents and related personnel in case management in a flexible and professional manner;

7.08(5)(c) communicate effectively with families to maintain their involvement with the student's assessment and intervention team;

7.08(5)(d) utilize a range of interpersonal communication skills including, but not limited to, consultation, collaboration, counseling, listening, interviewing and teaming as appropriate to identification, prevention, assessment and/or intervention with students with suspected or identified communication disabilities;

7.08(5)(e) mentor and supervise speech-language pathology assistants, graduate student interns and other support personnel so that the communication needs of students are addressed effectively and confidentially;

7.08(5)(f) participate in professional development opportunities to improve skills, and educate other professionals regarding risk factors to students, involving all means of communication;

7.08(5)(g) conduct research, initiate requests or network with related professionals to acquire support as needed; and

7.08(5)(h) routinely evaluate and measure personal performance as a speech/language pathologist to ensure professional efficacy and achievement of appropriate outcomes and participate in professional development and professional organizations to increase knowledge and growth in skills and abilities.

7.09 School Counselor (PreK-12)

To be endorsed as a school counselor, applicants must hold a master's or higher degree in school counseling from a Council for Accreditation of Counseling and Related Educational Programs-accredited program at a regionally accredited institution of higher education or demonstrate equivalent coursework and training experiences as determined by the department; have completed a minimum of 100 clock-

hours of a practicum, scheduled throughout the program, and a 600 clock-hour internship, supervised by a licensed school counselor in a school setting with multiple grade levels of students that provides opportunities for the candidate, to engage in a variety of activities that an effective school counselor would be expected to perform as identified in the 2016 Council for Accreditation of Counseling and Related Educational Programs Standards;, and have passed the state-approved school counseling assessment.

7.09(1) The school counselor demonstrates mastery of and expertise in all aspects of school counseling and is able to:

7.09(1)(a) develop, organize, administer and evaluate school counseling programs;

7.09(1)(b) apply appropriate modalities for the school setting;

7.09(1)(c) provide social-emotional learning and college, career and academic counseling to students individually and in group settings;

7.09(1)(d) support and/or establish safe, inclusive, equitable and respectful environments that recognize the diversity and needs of the student population; and

7.09(1)(e) plan, deliver and monitor services and specially designed instruction that facilitate learning for all students.

7.09(2) The school counselor demonstrates leadership through collaboration with educators, administrators, families and community organizations to advocate for students.

7.09(3) The school counselor shall self-assess the effectiveness the school counseling program, reflect on personal practice and pursue continuous professional development through appropriate activities, coursework and participation in relevant professional organizations.

Editor's Notes

History

New rule eff. 08/14/2018.

New rule eff. [tbd]

Notice of Proposed Rulemaking

Tracking number

2024-00022

Department

700 - Department of Regulatory Agencies

Agency

729 - Division of Professions and Occupations - State Board of Landscape Architects

CCR number

4 CCR 729-1

Rule title

LANDSCAPE ARCHITECTS RULES AND REGULATIONS

Rulemaking Hearing**Date**

02/16/2024

Time

10:00 AM

Location

Webinar only - See below

Subjects and issues involved

The Colorado State Board of Landscape Architects will hold a Rulemaking Hearing on February 16, 2024, at 10:00 A.M. to receive testimony before the Board determines whether to repeal Rule 1.9 on a permanent basis to implement Colorado Senate Bill 23-265.

Statutory authority

12-20-204, 12-130-107(1)(a), and 24-4-103 C.R.S.

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DEPARTMENT OF REGULATORY AGENCIES

State Board of Landscape Architects

LANDSCAPE ARCHITECTS RULES AND REGULATIONS

4 CCR 729-1

[Editor's Notes follow the text of the rules at the end of this CCR Document.]

...

1.9 — PROTECTING COLORADO'S WORKFORCE AND EXPANDING LICENSING OPPORTUNITIES

This Rule is promulgated pursuant to Executive Order D 2022 034, and sections 12-20-204 and 12-130-107(1)(a), C.R.S.

A. — Definitions, for purposes of this Rule, are as follows:

1. — "Applicant" means as defined in section 12-20-102(2), C.R.S.

2. — "Civil judgment" means a final court decision and order resulting from a civil lawsuit.

3. — "Criminal judgment" means a guilty verdict, a plea of guilty, a plea of nolo contendere, or a deferred judgment or sentence.

4. — "Licensee" means as defined in section 12-20-102(10), C.R.S.

5. — "Regulator" means as defined in section 12-20-102(14), C.R.S.

B. — The regulator shall not deny licensure to an applicant or impose disciplinary action against an individual's license based solely on a civil or criminal judgment against the licensee regarding the consumption, possession, cultivation, or processing of marijuana so long as the actions are lawful and consistent with professional conduct and standards of care within Colorado and did not otherwise violate Colorado law.

C. — The regulator shall not deny licensure to an applicant or impose disciplinary action against an individual's license based solely on a professional disciplinary action against the applicant's or licensee's professional license in this, or any other state or U.S. territory so long as the professional disciplinary action is based solely on the licensee's consumption, possession, cultivation, or processing of marijuana and did not otherwise violate Colorado law.

Editor's Notes

History

Entire rule eff. 01/01/2008.

Entire rule eff. 05/01/2008.

Rules 3.1.9; 4.1.1.7; 4.1.1.7.2; 4.1.1.9; 4.3; 4.3.2; 4.5.1; 4.7 eff. 04/01/2009.

Entire rule eff. 01/01/2012.

Rules 2.2, 4.5.2(j) eff. 10/01/2012.

Rules 2.2, 5.1.5, 5.2.1(c), 5.4.2 eff. 03/17/2013.

Entire rule eff. 09/14/2022.

Rule 1.9 emer. rule eff. 11/18/2022.

Rule 1.9 eff. 12/30/2022.

Annotations

Rules 1.9 B. and 1.9 C. were to be expired by Senate Bill 23-102. However, these rules were not adopted on or after November 1, 2021 and before November 1, 2022 pursuant to section 24-4-103(8)(c), C.R.S., and therefore were not removed.

Notice of Proposed Rulemaking

Tracking number

2024-00023

Department

700 - Department of Regulatory Agencies

Agency

740 - Division of Professions and Occupations - Colorado Office of Combative Sports

CCR number

4 CCR 740-1

Rule title

COMBATIVE SPORTS RULES AND REGULATIONS

Rulemaking Hearing

Date

02/22/2024

Time

10:00 AM

Location

Webinar only - See below

Subjects and issues involved

The Colorado Office of Combative Sports and Colorado Combative Sports Commission will hold a Rulemaking Hearing on February 22, 2024, at 10:00 A.M. to receive testimony before the Director determines whether to repeal Rule 1.18, on a permanent basis, to implement Colorado Senate Bill 23-265.

Statutory authority

12-20-204, 12-110-107, and 24-4-103 C.R.S.

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DEPARTMENT OF REGULATORY AGENCIES

Colorado Office of Combative Sports and Colorado Combative Sports Commission

COMBATIVE SPORTS RULES AND REGULATIONS

4 CCR 740-1

[Editor's Notes follow the text of the rules at the end of this CCR Document.]

...

~~1.18 — PROTECTING COLORADO'S WORKFORCE AND EXPANDING LICENSING OPPORTUNITIES~~

~~This Rule is promulgated pursuant to Executive Order D 2022 034, and sections 12-110-107 and 12-20-204, C.R.S.~~

~~A. — Definitions, for purposes of this Rule, are as follows:~~

~~1. — "Applicant" means as defined in section 12-20-102(2), C.R.S.~~

~~2. — "Civil judgment" means a final court decision and order resulting from a civil lawsuit.~~

~~3. — "Criminal judgment" means a guilty verdict, a plea of guilty, a plea of nolo contendere, or a deferred judgment or sentence.~~

~~4. — "Licensee" means as defined in section 12-20-102(10), C.R.S.~~

~~5. — "Regulator" means as defined in section 12-20-102(14), C.R.S.~~

~~B. — [Expired 05/15/2023 per Senate Bill 23-102]~~

~~C. — [Expired 05/15/2023 per Senate Bill 23-102]~~

Editor's Notes

History

Rule 1.018 emer. rule eff. 09/24/2010; expired eff. 01/22/2011.

Entire rule eff. 09/01/2011.

Rules 1.1, 1.5, 2.6, 2.8, 2.9, 2.11, 3.2, 3.6, 5.11, 7.6, 12.4, 13.2, 13.3, 14.1 eff. 07/01/2016.

Entire rule eff. 07/01/2018.

Rules 1.1, 1.2, 1.7, 1.8, 2.5, 2.9-2.20, 3.3, 3.4, 5.1, Chapters 6-7, rules 8.6-8.13, 11.3 D.ix, 13.2, 13.3, 13.7-13.9, 14.1, 14.15-14.17 emer. rules eff. 06/18/2019.

Rules 1.1, 1.2, 1.7, 1.8, 2.1, 2.5, 2.9-2.20, 3.3, 3.4, 5.1, 5.4, 6.1-6.5, 7.1, 7.2, 8.6-8.13, 10.1, 11.3, 12.2-12.4, 13.1-13.9, 14.1, 14.2 D, 14.15-14.17 eff. 12/30/2019.

Entire rule eff. 05/30/2021.

Rule 1.4 K.2 eff. 11/30/2021.

Rule 1.18 emer. rule eff. 10/12/2022.

Rules 1.3, 1.6 F.6, 1.8 B, 1.10 A, 1.11 A, 1.12 D.4.b, 1.12 E.1, 1.13 A.11, 1.14 C.6.a, 1.16 D.1, 1.16 G.1.d, 1.16 H.4, 1.17 U, 1.18 eff. 11/30/2022.

Annotations

Rules 1.18 B. and 1.18 C. (adopted 10/12/2022) were not extended by Senate Bill 23-102 and therefore expired 05/15/2023.

Notice of Proposed Rulemaking

Tracking number

2024-00012

Department

1000 - Department of Public Health and Environment

Agency

1003 - Water And Wastewater Facility Operators Certification Board

CCR number

5 CCR 1003-2

Rule title

REGULATION NO. 100 - WATER AND WASTEWATER FACILITY OPERATORS
CERTIFICATION REQUIREMENTS

Rulemaking Hearing**Date**

02/27/2024

Time

09:00 AM

Location

Online only: https://us02web.zoom.us/join/ztZcof-6tqTsvG9U_2RlfBOFX5purfRpKjJGp

Subjects and issues involved

To ensure that the regulations are consistent with the operator certification statute and align with new language in the Water Quality Control Commissions updated Regulation #86. On November 13, 2023, the commission adopted the divisions proposed changes to Regulation #86, the Graywater Control Regulation, to no longer require a certified operator for Category D Graywater, and to instead specify that a certified operator is required for graywater treatment works that produce greater than 2,000 gallons per day.

Statutory authority

Sections 25-9-104(1), (3) and (6), C.R.S.

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NOTICE OF PUBLIC RULEMAKING HEARING

BEFORE THE

WATER AND WASTEWATER FACILITY OPERATORS CERTIFICATION BOARD

SUBJECT:

For consideration of proposed revisions to Regulation No. 100, "Water and Wastewater Facility Operators Certification Requirements" (5 CCR 1003-2). The revisions to Regulation 100 proposed by the Water Quality Control Division, along with the proposed Statement of Basis, Statutory Authority, and Purpose, are attached to this notice as Exhibit 1. Proposed new language is shown with double-underlining and proposed deletions are shown with ~~strikeouts~~.

HEARING SCHEDULE:

DATE: Tuesday, February 27, 2024

TIME: 9:00 a.m. (MST)

PLACE: Virtual Meeting

https://us02web.zoom.us/meeting/register/tZcof-6tqTsvG9U_2RlfBOFX5purfRpKjJGp

WRITTEN COMMENTS:

The Operators Certification Board encourages all interested persons to provide their opinions or recommendations regarding the matters to be addressed in this rulemaking hearing; however, no oral comments on the proposed rule will be received at the hearing.

Written comments must be received by February 7, 2024. Anyone providing written comments should deliver an electronic copy to cdphe.wwfocb@state.co.us. All written comments will be available to the public on the Board's website.

SPECIFIC STATUTORY AUTHORITY:

Sections 25-9-104 and 25-9-108, C.R.S. provide the specific authority for consideration of the regulatory provisions proposed by this notice. Should the Operators Certification Board adopt the regulatory language as proposed in this notice or alternative provisions, it will also adopt, in compliance with section 24-4-103(4) C.R.S., an appropriate Statement of Basis, Specific Statutory Authority, and Purpose.

Dated this 9th day of January 2024 at Denver, Colorado.

WATER AND WASTEWATER FACILITY OPERATORS CERTIFICATION BOARD



Brandy Valdez-Murphy, Administrator

Exhibit 1

DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Water and Wastewater Facility Operators Certification Board

REGULATION NO. 100 – WATER AND WASTEWATER FACILITY OPERATORS CERTIFICATION REQUIREMENTS

5 CCR 1003-2

.....

100.1 AUTHORITY AND PURPOSE

.....

100.1.5 Automatic Exemptions

- (a) The following facilities and systems are exempt from the requirement to operate under the supervision of a certified operator in responsible charge:

.....

- (v) ~~Category A, B, And C-g~~ Graywater treatment facilities as defined in *Graywater Control Regulation*, 5 CCR 1002-86, **having a capacity of 2,000 gpd or less.**

.....

100.6 RECLAIMED WATER AND GRAYWATER TREATMENT FACILITY AND DISTRIBUTION SYSTEM CLASSIFICATION

100.6.1 Reclaimed water treatment facilities or a ~~“category D non-single family, indoor toilet and urinal flushing~~ graywater treatment works” **with a capacity greater than 2,000 gpd** in *Graywater Control Regulation*, 5 CCR 1002-86, shall be based on the water treatment facility classifications in section 100.4 and the domestic wastewater treatment facility classifications in section 100.5 as noted below. The facilities may require single or dual classifications based on the site-specific conditions.

.....

100.64 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE:
FEBRUARY 27, 2024 RULEMAKING; EFFECTIVE APRIL 1, 2024

Sections 25-9-104(1), (3) and (6), C.R.S. provide the specific statutory authority for the adoption of amendments to the established regulatory provisions of Regulation 100 (5 CCR 1003-2) governing requirements for water and wastewater facility operators. The Board hereby adopts, in compliance with section 24-4-103(4), C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE

The Board held a rulemaking hearing on February 27, 2024, and revised certain portions of sections 100.1 and 100.6 to ensure that the regulations are consistent with the operator certification statute and align with new language in the Water Quality Control Commission's updated Regulation #86. On November 13, 2023, the commission adopted the division's proposed changes to Regulation #86, the Graywater Control Regulation, to no longer require a certified operator for “Category D” Graywater, and to

instead specify that a certified operator is required for graywater treatment works that produce greater than 2,000 gallons per day.

The Board determined that these revisions to Regulation 100 allow for the regulation to be worded more clearly and to prevent any additional revisions in the likely event that Regulation #86 is revised in the future to introduce new graywater uses. The revisions to Regulation #86 removed specific category types of graywater treatment facilities based on uses that were referenced in Regulation 100, and likewise, the Board removed the reference to Categories A, B and C in Regulation 100 to be more general. These revisions to Regulation 100 also now align with the 2,000 gallons per day threshold for state review under the Water Quality Control Act, and ensure that certified operator requirements apply to larger graywater systems. These revisions also align with other wastewater program requirements.

Notice of Proposed Rulemaking

Tracking number

2024-00014

Department

1000 - Department of Public Health and Environment

Agency

1006 - Center for Health and Environmental Data (1006, 1009 Series)

CCR number

5 CCR 1006-1

Rule title

VITAL STATISTICS

Rulemaking Hearing

Date

02/21/2024

Time

10:00 AM

Location

4300 Cherry Creek Drive South, Denver, CO 80246 or <https://us02web.zoom.us/join/join?from=addon>
GhrjlvGNdegNvPKBx9kE33cVnwQYb6#/registration

Subjects and issues involved

Senate Bill 23-020, Timely Certified Death Certificates (SB23-020 or the act), passed during the first regular session of the 74th General (2023) General Assembly. The act changes the amount of time in which a participant in the death registration process must complete their portion of the certificate to 72 hours upon receipt of a notice or assumption of a decedent, requires that all funeral directors, physicians, and coroners use the electronic death registration system to register deaths in Colorado, and requires the State Registrar to submit a monthly report to the Department of Regulatory Agencies identifying death certificates that were not timely filed. The purpose of this rulemaking is to align 5 CCR 1006-1, Vital Statistics with the requirements of the act by removing ambiguous and conflicting language.

Statutory authority

§ 25-2-103(2) C.R.S.

Other relevant statutes: § 25-2-110 C.R.S.

Contact information

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**COLORADO**Department of Public
Health & Environment

To: Members of the State Board of Health

From: A. Alex Quintana, State Registrar and Director of Vital Records, CHED

Through: Chris Wells, Center for Health and
Environmental Data Division Director *CSW*

Date: December 20, 2023

Subject: Request for a Rulemaking Hearing concerning 5 CCR 1006-1, Vital Statistics

The Office of the State Registrar of Vital Statistics is requesting rulemaking regarding 5 CCR 1006-1, Vital Statistics. The purpose of this rulemaking is to ensure that the rule conforms to new legislation, Senate Bill 23-020, Timely Certified Death Certificates.

The new act requires that all parties involved in the registration of a death certificate, which includes funeral directors, coroners, and physicians, with the exception of family members or others acting in a non-professional capacity as the funeral director, use the electronic death registration system to do so. The act also changes the timeframe from five days to seventy-two hours to file a death certificate, when possible. The act requires that the State Registrar submit a monthly report to the Department of Regulatory Agencies listing death certificates for those certificates that were not filed in a timely manner.

The scope of the rulemaking is limited to adding a definition of the term qualified individual, removing language that allows other methods to submit death reports aside from those permitted in the new act concerning the use of the Electronic Death Registration system, and replacing current language with language stated in the bill, or language that supports it, where necessary.

**STATEMENT OF BASIS AND PURPOSE
AND SPECIFIC STATUTORY AUTHORITY**
for Amendments to
5 CCR 1006-1, Vital Statistics

Basis and Purpose.

Senate Bill 23-020, Timely Certified Death Certificates (“SB23-020” or “the act”), passed during the first regular session of the 74th General (2023) General Assembly. The act changes the amount of time in which a participant in the death registration process must complete their portion of the certificate to 72 hours upon receipt of a notice or assumption of a decedent, requires that all funeral directors, physicians, and coroners use the electronic death registration system to register deaths in Colorado, and requires the State Registrar to submit a monthly report to the Department of Regulatory Agencies identifying death certificates that were not timely filed.

The purpose of this rulemaking is to align 5 CCR 1006-1, Vital Statistics with the requirements of the act by removing ambiguous and conflicting language.

Section 2.1, Definitions, has been updated to add the definition for “qualified individual” as the term is used in SB23-020, referring to medical certifiers other than coroners, medical examiners, and forensic pathologists, such as physicians and their associate physicians.

Section 2.4, General Requirements for Preparing Certificates, now contains a reference to the updated statute and adds the language in statute concerning those acting in a non-professional capacity as the funeral director to register a death without having to use the electronic system. Language regarding the grant of a waiver by the State Registrar has been removed since the use of the electronic system is mandatory and historically the request for a waiver has never been submitted. The requirement to use a typewriter has been removed as well as the option of using blue ink, as the former is obsolete technology and the latter is not practical when using a computer printer. Sub-section B is now re-purposed to prescribe the methods through which a death report shall be submitted by those acting in a non-professional capacity as a funeral director.

Section 6.1, Acceptance of Incomplete Record, has been modified to replace the previous five-day requirement to file a death certificate with the new requirement of filing a death certificate within seventy-two hours, in addition to adding language that mirrors the act to provide complete instructions within the rule.

Section 6.2 adds the phrase “of death” to enhance clarity.

Section 9.1 contains a minor grammatical correction.

Specific Statutory Authority.

Statutes that require or authorize rulemaking:

§ 25-2-103(2) C.R.S.

Other relevant statutes:

§ 25-2-110 C.R.S.

Is this rulemaking due to a change in state statute?

☒ Yes, the bill number is SB23-020. Rules are ☒ authorized ☐ required.

☐ No

Does this rulemaking include proposed rule language that incorporate materials by reference?

☐ Yes ☐ URL

☒ No

Does this rulemaking include proposed rule language to create or modify fines or fees?

☐ Yes

☒ No

Does the proposed rule language create (or increase) a state mandate on local government?

☒ No.

- The proposed rule does not require a local government to perform or increase a specific activity for which the local government will not be reimbursed;
- The proposed rule requires a local government to perform or increase a specific activity because the local government has opted to perform an activity, or;
- The proposed rule reduces or eliminates a state mandate on local government.

REGULATORY ANALYSIS
for Amendments to
5 CCR 1006-1, Vital Statistics

1. A description of the classes of persons affected by the proposed rule, including the classes that will bear the costs and the classes that will benefit from the proposed rule.

Group of persons/entities Affected by the Proposed Rule	Size of the Group	Relationship to the Proposed Rule Select category: C/S/B
Funeral Directors	750	C
Physicians	~5000	C
Coroners	64	C/CLG
Hospitals & Physician Groups and Associations		S
Local Vital Records Offices	55	CLG
Families of decedents	47,000	B

While all are stakeholders, groups of persons/entities connect to the rule and the problem being solved by the rule in different ways. To better understand those different relationships, please use this relationship categorization key:

C = individuals/entities that implement or apply the rule.

CLG = local governments that must implement the rule in order to remain in compliance with the law.

S = individuals/entities that do not implement or apply the rule but are interested in others applying the rule.

B = the individuals that are ultimately served, including the customers of our customers. These individuals may benefit, be harmed by or be at-risk because of the standard communicated in the rule or the manner in which the rule is implemented.

More than one category may be appropriate for some stakeholders.

2. To the extent practicable, a description of the probable quantitative and qualitative impact of the proposed rule, economic or otherwise, upon affected classes of persons.

In order to comply with Senate Bill 23-020 ("SB23-020"), the proposed rule directs parties - aside from those individuals who act as funeral directors in a non-professional capacity - involved in the death registration process to utilize an electronic form, rather than a paper form, when completing their portion of the death registration process. As such, funeral directors, physicians, and coroners must use the electronic death registration system when

completing a death certificate. The proposed rule also states that a death certificate must be filed with the State Registrar within seventy-two hours of assuming custody of a dead body, unless an inquiry by a coroner or more time is needed by either a coroner, medical examiner, forensic pathologist, or qualified individual to make a proper inquiry to determine the cause and manner of death.

Using the electronic death registration system requires a smartphone, electronic tablet or computer with access to the internet, as it is a web-based system. Any professional that plays a part in registering a death certificate and does not have access to the system must contact the Office of the State Registrar of Vital Statistics to obtain access. Once access is granted, then they will receive requests from others involved in the registration of the death certificate via email so that they can complete their portion of the death report. As internet access for physicians, funeral homes, coroners, and hospitals is common, no significant quantitative and qualitative impacts are expected to these classes of persons. Families of decedents should receive a positive qualitative impact from the proposed rule through the requirement of having all parties use the electronic death registration system as those death certificates are filed more quickly than death certificates where at least one party contributes their portion via paper.

Summarize the financial costs and benefits, include a description of costs that must be incurred, costs that may be incurred, and any Department measures taken to reduce or eliminate these costs, any financial benefits.

C: There are no financial costs or benefits associated with using the electronic death registration system.

CLG: There are no financial costs or benefits associated with using the electronic death registration system.

S: There are no financial costs or benefits associated with using the electronic death registration system.

B: Families of decedents may benefit economically by accessing financial benefits contained within insurance policies, social security benefits, etc. sooner due to the requirement that all participants in the death registration process use the electronic system. Our data has shown that deaths registered through the electronic system are filed quicker than a paper-based or hybrid method. For example, in 2022, 90% of fully-electronic death registrations were completed within 13 days, whereas 90% of all drop-to-paper registrations were completed within 22 days. Alternatively, the majority of fully-electronic death registrations were completed within 4 days, versus 8 days for drop-to-paper registrations.

Summarize the anticipated favorable and non-favorable non-economic outcomes (short-term and long-term), and, if known, the likelihood of the outcomes for each affected class of persons by the relationship category.

C: Using the electronic death registration system is anticipated to reduce the amount of time taken in registering a death certificate. This would increase the level of customer service

provided to those whom funeral directors, physicians, and coroners serve. There are no non-favorable non-economic outcomes identified at this time.

CLG: Local vital records offices would benefit by having more time to serve their customers since less of their time will be used to help process hybrid death registrations. Coroners are expected to see death certificates filed more quickly due to the use of the electronic death system mandate, providing death data more quickly for their analysis.

S: Many physicians work at hospitals and thus hospitals want to make sure that their physicians have the tools and support they need to perform their responsibilities. Physician groups and associations also want to ensure that their physicians are informed and equipped to comply with law and have the information and resources to ensure that they can do their jobs well. The proposed rule requires physicians to utilize the electronic death registration system and by doing so, the doctors are complying with law, ensuring that hospitals, physician groups and member associations maintain a positive reputation among their members and outsiders. There is no additional software required to be installed on a physician's computer in order to use the EDR system; however, learning how to register a death using the EDR will take some time. The Vital Statistics Office has many training resources available online to help EDRS users understand how to register deaths. The Office also provides email and phone support should a physician need assistance in learning how to use the system.

B: Families of decedents may benefit economically by accessing financial benefits contained within insurance policies, social security benefits, etc. sooner due to the requirement that all participants in the death registration process use the electronic system. Our data has shown that deaths registered through the electronic system are filed quicker than a paper-based or hybrid method.

3. The probable costs to the agency and to any other agency of the implementation and enforcement of the proposed rule and any anticipated effect on state revenues.

A. Anticipated CDPHE personal services, operating costs or other expenditures:

There is **no fiscal impact** associated with SB23-020 or the proposed rule. Work associated with processing hybrid death registrations will be directed towards other work in the office that is expected to result in better customer service through timelier processing of other death certificate unit services.

Anticipated CDPHE Revenues:

N/A

B. Anticipated personal services, operating costs or other expenditures by another state agency:

Anticipated Revenues for another state agency:

N/A

4. A comparison of the probable costs and benefits of the proposed rule to the probable costs and benefits of inaction.

Along with the costs and benefits discussed above, the proposed revisions:

- ☒ **Comply with a statutory mandate to promulgate rules.**
- ☒ **Comply with federal or state statutory mandates, federal or state regulations, and department funding obligations.**
- ☐ Maintain alignment with other states or national standards.
- ☐ Implement a Regulatory Efficiency Review (rule review) result
- ☐ Improve public and environmental health practice.
- ☐ Implement stakeholder feedback.

Advance the following CDPHE Strategic Plan priorities (select all that apply):

<p>1. Reduce Greenhouse Gas (GHG) emissions economy-wide from 125.716 million metric tons of CO₂e (carbon dioxide equivalent) per year to 119.430 million metric tons of CO₂e per year by June 30, 2020 and to 113.144 million metric tons of CO₂e by June 30, 2023.</p> <p><input type="checkbox"/> Contributes to the blueprint for pollution reduction</p> <p><input type="checkbox"/> Reduces carbon dioxide from transportation</p> <p><input type="checkbox"/> Reduces methane emissions from oil and gas industry</p> <p><input type="checkbox"/> Reduces carbon dioxide emissions from electricity sector</p>
<p>2. Reduce ozone from 83 parts per billion (ppb) to 80 ppb by June 30, 2020 and 75 ppb by June 30, 2023.</p> <p><input type="checkbox"/> Reduces volatile organic compounds (VOC) and oxides of nitrogen (NO_x) from the oil and gas industry.</p> <p><input type="checkbox"/> Supports local agencies and COGCC in oil and gas regulations.</p> <p><input type="checkbox"/> Reduces VOC and NO_x emissions from non-oil and gas contributors</p>
<p>3. Decrease the number of Colorado adults who have obesity by 2,838 by June 30, 2020 and by 12,207 by June 30, 2023.</p> <p><input type="checkbox"/> Increases the consumption of healthy food and beverages through education, policy, practice and environmental changes.</p> <p><input type="checkbox"/> Increases physical activity by promoting local and state policies to improve active transportation and access to recreation.</p> <p><input type="checkbox"/> Increases the reach of the National Diabetes Prevention Program and Diabetes Self-Management Education and Support by collaborating with the Department of Health Care Policy and Financing.</p>
<p>4. Decrease the number of Colorado children (age 2-4 years) who participate in the WIC Program and have obesity from 2120 to 2115 by June 30, 2020 and to 2100 by June 30, 2023.</p>

<p>___ Ensures access to breastfeeding-friendly environments.</p>
<p>5. Reverse the downward trend and increase the percent of kindergartners protected against measles, mumps and rubella (MMR) from 87.4% to 90% (1,669 more kids) by June 30, 2020 and increase to 95% by June 30, 2023.</p> <p>___ Reverses the downward trend and increase the percent of kindergartners protected against measles, mumps and rubella (MMR) from 87.4% to 90% (1,669 more kids) by June 30, 2020 and increase to 95% by June 30, 2023.</p> <p>___ Performs targeted programming to increase immunization rates.</p> <p>___ Supports legislation and policies that promote complete immunization and exemption data in the Colorado Immunization Information System (CIIS).</p>
<p>6. Colorado will reduce the suicide death rate by 5% by June 30, 2020 and 15% by June 30, 2023.</p> <p>___ Creates a roadmap to address suicide in Colorado.</p> <p>___ Improves youth connections to school, positive peers and caring adults, and promotes healthy behaviors and positive school climate.</p> <p>___ Decreases stigma associated with mental health and suicide, and increases help-seeking behaviors among working-age males, particularly within high-risk industries.</p> <p>___ Saves health care costs by reducing reliance on emergency departments and connects to responsive community-based resources.</p>
<p>7. The Office of Emergency Preparedness and Response (OEPR) will identify 100% of jurisdictional gaps to inform the required work of the Operational Readiness Review by June 30, 2020.</p> <p>___ Conducts a gap assessment.</p> <p>___ Updates existing plans to address identified gaps.</p> <p>___ Develops and conducts various exercises to close gaps.</p>
<p>8. For each identified threat, increase the competency rating from 0% to 54% for outbreak/incident investigation steps by June 30, 2020 and increase to 92% competency rating by June 30, 2023.</p> <p>___ Uses an assessment tool to measure competency for CDPHE's response to an outbreak or environmental incident.</p> <p>___ Works cross-departmentally to update and draft plans to address identified gaps noted in the assessment.</p> <p>___ Conducts exercises to measure and increase performance related to identified gaps in the outbreak or incident response plan.</p>
<p>9. 100% of new technology applications will be virtually available to customers, anytime and anywhere, by June 20, 2020 and 90 of the existing applications by June 30, 2023.</p> <p>___ Implements the CDPHE Digital Transformation Plan.</p> <p>___ Optimizes processes prior to digitizing them.</p> <p>___ Improves data dissemination and interoperability methods and timeliness.</p>

<p>10. Reduce CDPHE's Scope 1 & 2 Greenhouse Gas emissions (GHG) from 6,561 metric tons (in FY2015) to 5,249 metric tons (20% reduction) by June 30, 2020 and 4,593 tons (30% reduction) by June 30, 2023.</p> <p>___ Reduces emissions from employee commuting</p> <p>___ Reduces emissions from CDPHE operations</p>
<p>11. Fully implement the roadmap to create and pilot using a budget equity assessment by June 30, 2020 and increase the percent of selected budgets using the equity assessment from 0% to 50% by June 30, 2023.</p> <p>___ Used a budget equity assessment</p>

___ Advance CDPHE Division-level strategic priorities.

The costs and benefits of the proposed rule will not be incurred if inaction was chosen. Costs and benefits of inaction not previously discussed include:

If rulemaking is not pursued, then the regulation could be interpreted to contradict Colorado statute, increasing the department's risk of litigation.

5. A determination of whether there are less costly methods or less intrusive methods for achieving the purpose of the proposed rule.

Rulemaking is proposed when it is the least costly method or the only statutorily allowable method for achieving the purpose of the statute. The specific revisions proposed in this rulemaking were developed in conjunctions with stakeholders. The benefits, risks and costs of these proposed revisions were compared to the costs and benefits of other options. The proposed revisions provide the most benefit for the least amount of cost, are the minimum necessary or are the most feasible manner to achieve compliance with statute.

6. Alternative Rules or Alternatives to Rulemaking Considered and Why Rejected.

See response #4 and 5.

7. To the extent practicable, a quantification of the data used in the analysis; the analysis must take into account both short-term and long-term consequences.

N/A

STAKEHOLDER ENGAGEMENT

for Amendments to
5 CCR 1006-1, Vital Statistics

State law requires agencies to establish a representative group of participants when considering to adopt or modify new and existing rules. This is commonly referred to as a stakeholder group.

Early Stakeholder Engagement:

The following individuals and/or entities were invited to provide input and included in the development of these proposed rules:

Organization	Representative Name and Title (if known)
Colorado Academy of Family Physicians	Ryan Biehle, Executive Director
Colorado Coroners Association	Randy Keller, President
Colorado Funeral Directors Association	Joseph Walsh, President
Colorado Medical Society	Omar Mubarak, President
Department of Regulatory Agencies	Paula Martinez, Program Director
The Office of Senator James Coleman	Carla Blanc, Legislative Aide
Funeral Directors on Vital Records Listserv	
Local Vital Records Offices on Vital Records Listserv	
Physicians on Vital Records Listserv	

Stakeholder Group Notification

The stakeholder group was provided notice of the rulemaking hearing and provided a copy of the proposed rules or the internet location where the rules may be viewed. Notice was provided prior to the date the notice of rulemaking was published in the Colorado Register (typically, the 10th of the month following the Request for Rulemaking).

☒ Not applicable. This is a Request for Rulemaking Packet. Notification will occur when the Board of Health sets this matter for rulemaking.

☐ Yes.

Summarize Major Factual and Policy Issues Encountered and the Stakeholder Feedback Received. If there is a lack of consensus regarding the proposed rule, please also identify the Department's efforts to address stakeholder feedback or why the Department was unable to accommodate the request.

N/A

Please identify the determinants of health or other health equity and environmental justice considerations, values or outcomes related to this rulemaking.

Overall, after considering the benefits, risks and costs, the proposed rule:

Select all that apply.

	Improves behavioral health and mental health; or, reduces substance abuse or suicide risk.	x	Reduces or eliminates health care costs, improves access to health care or the system of care; stabilizes individual participation; or, improves the quality of care for unserved or underserved populations.
	Improves housing, land use, neighborhoods, local infrastructure, community services, built environment, safe physical spaces or transportation.		Reduces occupational hazards; improves an individual's ability to secure or maintain employment; or, increases stability in an employer's workforce.
	Improves access to food and healthy food options.		Reduces exposure to toxins, pollutants, contaminants or hazardous substances; or ensures the safe application of radioactive material or chemicals.
	Improves access to public and environmental health information; improves the readability of the rule; or, increases the shared understanding of roles and responsibilities, or what occurs under a rule.		Supports community partnerships; community planning efforts; community needs for data to inform decisions; community needs to evaluate the effectiveness of its efforts and outcomes.
	Increases a child's ability to participate in early education and educational opportunities through prevention efforts that increase protective factors and decrease risk factors, or stabilizes individual participation in the opportunity.		Considers the value of different lived experiences and the increased opportunity to be effective when services are culturally responsive.
	Monitors, diagnoses and investigates health problems, and health or environmental hazards in the community.		Ensures a competent public and environmental health workforce or health care workforce.
	Other: _____ _____		Other: _____ _____

Note

The PDF will include merged content: Signed version of SB23-020, and this packet.

DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT**Center for Health and Environmental Data****VITAL STATISTICS****5 CCR 1006-1**

SECTION 2 DEFINITIONS, DESIGNATION OF OFFICES, SUBMISSION, USE, AND DISTRIBUTIONS OF VITAL STATISTICS**SECTION 2.1 Definitions**

As used in this regulation, unless the context otherwise requires:

- A. "Certificate" means a printed, certified copy of the vital event record.
- B. "Legal representative" means an attorney, physician, funeral director, or other authorized agent, as determined by the State Registrar, acting on behalf of the registrant or his family.
- C. "Next of kin" means a person's closest living relative or relatives and those who, under Colorado law, have legal authority over the disposition of human remains, see Section 12-54-102(17), C.R.S.
- D. "Person with a direct and tangible interest" means the registrant, a member of the registrant's immediate family, as determined by the State Registrar, the registrant's legal guardian or legal custodian, or their respective legal representatives. Others may demonstrate a direct and tangible interest when information is needed for determination or protection of a personal or property right, or for genealogical purposes. The natural parents of adopted children when neither has custody, and commercial firms or agencies requesting listings of names and addresses shall not be considered to have a direct and tangible interest.
- E. "Qualified individual" means the physician, their associate physician, chief medical officer of the institution in which the death occurred, or the physician who performs an autopsy upon the decedent who is responsible for the medical certification for a certificate of death
- FE. "Record" means an electronic or paper vital event registered as reported, updated, and stored within the files of the office of the State Registrar of vital statistics and designated offices.
- GF. "Report" means an electronic or paper document containing information related to a vital event submitted by a person or entity required to submit the information in accordance with this state statute and this regulation for the purpose of registering a vital event.
- HG. "State Registrar" means the State Registrar of Vital Statistics or their designee.
- IH. "Vital event" means an event recognized under Colorado law as statistically significant. These include but are not limited to birth, marriage, civil unions, adoption, dissolution or nullification of marriage, dissolution or nullification of civil unions, parentage determinations, change of name, change of sex, death, and any data related thereto which have been accepted for registration and incorporated into the official records and certificates.

SECTION 2.4 General Requirements for Preparing Certificates

A. Those registering vital events will use the current version of the electronic registration system approved by the State Registrar, except a family member of the decedent or other individual acting in a non-professional capacity as the funeral director for the decedent as provided in section 25-2-110, C.R.S. The State Registrar, at their discretion, may grant waivers for not using the electronic registration system in unusual circumstances. If a waiver is granted, the report will be submitted on a typewriter with a black ribbon, on a letter quality printer with black or blue ink, or printed legibly in black, unfading ink.

B. Only those individuals authorized in state statute to register and certify vital event information to the State Registrar can submit a report. A family member of the decedent or other individual acting in a non-professional capacity as the funeral director for the decedent shall submit the report of death using a letter quality printer or hand-written legibly. All signatures shall be entered in black, unfading ink or an electronically as authorized by Section 24-71-101, C.R.S.

SECTION 6 DEATH REGISTRATION AND RECORDS

SECTION 6.1 Acceptance of Incomplete Record

A. Pursuant to Section 25-2-110, C.R.S., a certificate of death for each death, including a stillborn death, that occurs in Colorado, must be filed with the State Registrar, or as otherwise directed by the State Registrar, within five days after the death occurs seventy-two hours of assuming custody of a dead body, stillborn fetus, or dead fetus, and prior to final disposition, except when inquiry is required by subsection (5.5) of this rule or any provision of section 30-10-606, C.R.S. other than section 30-10-606 (1)(b), C.R.S., or when a coroner, a medical examiner, a forensic pathologist, or other qualified individual determines that additional time is necessary to make a proper inquiry to determine the cause and manner of death. In such a situation, the coroner, medical examiner, forensic pathologist, or other qualified individual shall complete and sign the certificate of death as soon as practicable. Pursuant to Section 25-48-109(2), C.R.S., when a death has occurred pursuant to the End of Life Options Act, the cause of death shall be listed as the underlying terminal illness and the death does not constitute grounds for post-mortem inquiry under Section 30-10-606 (1), C.R.S.

Except as provided in section 25-2-110, C.R.S., deaths shall be reported using the electronic death registration system used by the State Registrar.

A.B. If all the information necessary to complete a report of death is not available within the time prescribed for filing the report, the funeral director, or person acting as such, shall register the report with all information that is available. In all cases, the medical certification must be signed by the person responsible for such certification. If the cause of death is unknown, undetermined, or under investigation, this information will be recorded under cause of death in the report.

B.C. An amended report of death that provides the information missing from the original certificate, shall be signed and registered directed by the State Registrar within 90 days of the date the death

occurred, unless otherwise authorized by the State Registrar. The death certificate shall be marked "Amended."

SECTION 6.2 Hospital or Institution May Assist in Preparation of Certificate

When a death occurs in a hospital or other institution and the death is not under the jurisdiction of the coroner, the person in charge of such institution, or their designated representative, may initiate the report [of death](#) as follows:

A. By placing the full name of the decedent and the date, time and place of death on the death certificate and obtaining from the attending physician the medical certification of cause of death and the physician's signature; and,

B. By presenting the partially completed death certificate to the funeral director or person acting as such.

SECTION 9 RECORD PRESERVATION AND RELEASE

SECTION 9.1 Record preservation and destruction

When an authorized reproduction of a vital record has been properly prepared by the State Registrar and when all steps have been taken to [e](#)nsure the continued preservation of the information, the record from which such authorized reproduction was made may be disposed of by the State Registrar. Such record may not be disposed of, however, until the quality of the authorized reproduction has been tested to ensure that acceptable certified copies can be issued, and until a security copy of such document has been placed in a secure location removed from the building where the authorized reproduction is housed.



COLORADO

Board of Health

Department of Public Health & Environment

Notice of Public Rule-Making Hearing February 21, 2024

NOTICE is hereby given pursuant to the provisions of Section 24-4-103, C.R.S., that the Colorado Board of Health will conduct a public rule-making hearing on February 21, 2024 at 10 a.m. either in person in the Sabin-Cleere Conference Room of the Colorado Department of Public Health and Environment, Bldg. A, First Floor, 4300 Cherry Creek Drive, South, Denver, CO 80246, remotely via [Zoom](#), or via both mediums, to consider the amendments to 5 CCR 1006-1, Vital Statistics. The amendments are proposed by the Center for Health and Environmental Data of the Colorado Department of Public Health and Environment pursuant to Section 25-2-103, C.R.S.

The agenda for the meeting and the proposed repeal will also be available on the Board's website, <https://cdphe.colorado.gov/board-of-health> at least seven (7) days prior to the meeting. The proposed rule, together with the proposed statement of basis and purpose, specific statutory authority and regulatory analysis will be available for inspection at the Colorado Department of Public Health and Environment, 4300 Cherry Creek Drive South EDO-A5, Denver, Colorado 80246-1530 at least five working days prior to the hearing. Copies of the proposed rules may be obtained by contacting the Colorado Department of Public Health and Environment, Center for Health and Environmental Data, 4300 Cherry Creek Drive S., Denver, CO 80246, 303-692-2164.

The Board encourages all interested persons to participate in the hearing by providing written data, views, or comments. Written testimony is encouraged; oral testimony will be received only to the extent the Board finds it necessary. For those that are permitted to provide oral testimony, the time may be limited to 3 minutes or less. Testimony is limited to the scope of the rulemaking hearing. Pursuant to 6 CCR 1014-8, §3.02.1, written testimony must be submitted no later than five (5) calendar days prior to the rulemaking hearing. Written testimony must be received by 5:00 p.m., Thursday, February 15, 2024. Persons wishing to submit written comments should submit them to: Colorado Board of Health, ATTN: Board of Health Program Assistant, Colorado Department of Public Health and Environment, 4300 Cherry Creek Drive South EDO-A5, Denver, Colorado 80246-1530 or by e-mail at: cdphe.bohrequests@state.co.us

Dated this 4th day of January, 2024.

Ann M.
Hause

Digitally signed by Ann
M. Hause
Date: 2024.01.04
13:27:22 -07'00'

Ann Hause
Interim Board of Health Administrator

Notice of Proposed Rulemaking

Tracking number

2024-00015

Department

1000 - Department of Public Health and Environment

Agency

1007 - Hazardous Materials and Waste Management Division

CCR number

6 CCR 1007-1 Part 02

Rule title

RADIATION CONTROL - REGISTRATION OF RADIATION MACHINES, FACILITIES AND SERVICES

Rulemaking Hearing**Date**

02/21/2024

Time

10:00 AM

Location

4300 Cherry Creek Drive South, Denver, CO 80246 or <https://us02web.zoom.us/join/9tZcuc-GhrjlvGNdeqNvPKBx9kE33cVnwQYb6#/registration>

Subjects and issues involved

Changes to the Part 2 rule are proposed to improve the clarity and understanding of certain rule requirements. This includes updates to select definitions, reaffirming that facility registration is an annual process, clarifying language and slightly reorganizing tables pertaining to machine certification evaluations, adding clarifying language to ensure that the department is notified promptly when a machine fails inspection criteria as specified in statute. Without changing current requirements, we are also revising language to clarify that the body of the rule contains requirements for fully qualified mammographers, and the appendix (2M) is intended for use by those in training to become qualified mammographers.

Statutory authority

25-1.5-101(1)(k), 25-1.5-101(1)(l), 25-11-103, 25-11-104, and 25-1-108, C.R.S.

Contact information**Name**

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Title

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**COLORADO**Department of Public
Health & Environment

To: Members of the State Board of Health

From: James H. Grice, Radiation Program Manager, Hazardous Materials and Waste Management Division
James S. Jarvis, Regulatory Lead, Hazardous Materials and Waste Management Division

Through: Tracie M. White, Division Director *TMW*

Date: December 20, 2023

Subject: Request for a Rulemaking Hearing concerning 6 CCR 1007-1 Part 6, X-ray imaging in the healing arts and 6 CCR 1007-1, Part 2, Registration of radiation machines, facilities and services, with a request for a rulemaking hearing to be set for February 21, 2024.

The Division is proposing changes to x-ray machine regulations Part 6 and Part 2 primarily to clarify existing provisions, requirements and language in the rules relating to provisional mammographers, limited scope operators, routine certification evaluations, and to incorporate cardiac catheterization lab personnel into the current fluoroscopy operator registration. Following additional consideration, the Division is also proposing to remove language for a future requirement mandating the use of rectangular collimators for most dental intra-oral imaging due, primarily, to an inability for the regulated community to achieve compliance as a result of the lack of equipment availability. This requirement was added during the prior (2019-20 rulemaking) and becomes effective in 2025 if no change is made.

During the stakeholder comment period we received two written comments from stakeholders regarding the Part 6 proposed change in 6.7.2.3(3)(b) that would remove the requirement for rectangular collimators during routine dental intra-oral imaging procedures which is currently scheduled to go into effect January 1, 2025. One commenter supports the proposal to remove this provision citing greater potential for repeat examinations due to operator error in aligning the imaging port with the image receptor along with unreasonable burdens to train individuals to ensure this does not happen. The other commenter stated their opposition to removing provision 6.7.2.3(3)(b) noting the patient dose reduction benefits are well established and recognized by multiple professional associations, that voluntary adoption by the dental community is not likely, and that regulatory action by the department is necessary.

While we continuously support efforts to identify methods that will help reduce human exposure as outlined further in the rule package, we are proposing to remove this provision primarily due to the lack of market availability of universal add-on type collimator systems originally contemplated during the 2019-20 rulemaking. Secondly, consultation with representatives of the U.S. Food and Drug Administration (FDA) indicate that add-on devices, such as collimators, become part of the tube assembly that must be recertified under federal rules through the FDA similar to other components of an x-ray system.

Prior to and following the stakeholder process, our Radiation Advisory Committee reviewed and discussed the proposed rule changes and supported moving the rule forward as proposed and with no specific concerns opposing the proposed changes.

Since these rule changes affect select areas of the rule, only those impacted sections are included in the proposed draft. Throughout the rule, new text appears as red bold text while deleted language shows as strikethrough text.

The Radiation Program respectfully requests that the Board of Health set a rulemaking hearing for February 21, 2024 for these rules.

**DRAFT STATEMENT OF BASIS AND PURPOSE
AND SPECIFIC STATUTORY AUTHORITY**

for Amendments to

6 CCR 1007-1, Part 02, Registration of radiation machines, facilities and services
6 CCR 1007-1, Part 06, X-ray imaging in the healing arts;

Basis and Purpose.

Although there is some overlap in the proposed changes between Part 2 and Part 6 for this rulemaking, the updates for each regulatory part are described in further detail in separate sections below.

Part 2

Part 2 contains broad and specific requirements applicable to all x-ray machine facilities for any purpose, including non-medical and medical uses, it is applicable to those providing services to facilities that use x-ray machines (including inspection or repair), and also incorporates qualifications, training, and state registration requirements for certain operators of x-ray machines. For this rulemaking, most proposed changes apply to medical uses of machines.

As outlined for each section below, changes to the Part 2 rule are proposed to improve the clarity and understanding of certain rule requirements. This includes updates to select definitions, reaffirming that facility registration is an annual process, clarifying language and slightly reorganizing tables pertaining to machine certification evaluations, adding clarifying language to ensure that the department is notified promptly when a machine fails inspection criteria as specified in statute.

Without changing current requirements, we are also revising language to clarify that the body of the rule contains requirements for fully qualified mammographers, and the appendix (2M) is intended for use by those in training to become qualified mammographers.

The rule is clarified to indicate that training on imaging of the abdomen, and performing abdominal imaging in the field may be performed by qualified Limited Scope Operators (LSOs), consistent with most training programs and practice at facilities in Colorado. Abdominal imaging is one of the more common exams performed at facilities that employ LSOs. The level of supervision while LSOs are undergoing training is also clarified, consistent with current training programs and practice.

The registration process and criteria for fluoroscopy operators is amended to incorporate certain qualified and nationally registered individuals working in cardiac catheterization labs in Colorado. These individuals are and have been performing certain aspects of fluoroscopy operation under supervision by a physician at many Colorado facilities for many years. Under the present rule, these individuals fall outside of current criteria for registered fluoroscopy operators and registration of these individuals is evaluated on a case-by-case basis.

Summary of Part 2 changes by section

Changes throughout Part 2

- The word “Part” is added to the rule when there are references to federal (CFR) rules. Typographical errors, omissions, and alignment of text are also being corrected.

Changes to Section 2.1

- Updates are made to rulemaking adoption and effective dates and links to regulatory web pages.

Changes to Section 2.2 (Definitions)

- We are modifying the definition “Direct supervision” to remove language pertaining to mammography that is redundant with the revised Appendix 2M changes. Language is added to Appendix 2M to clarify the level of supervision during certain portions of an individual’s mammography training. This is not a change from the current requirements;
- The term “Personal supervision” is used in several sections of Part 2 and other rules, and therefore a reference to the Part 1 definition is added to Part 2 for clarity and understanding;
- We are revising the definitions “Provisional mammographer” and “Qualified mammographer” to reference the applicable sections in Appendix 2M or 2.4.5.4, consistent with other changes to these sections;
- Minor additions and clarifications are made to the “Radiologic technologist” and similar abbreviations consistent with language used by a primary certifying organization - the American Registry of Radiologic Technologists (ARRT).

Changes to Section 2.3.2

- Section 2.3.2 is amended using plain language for clarity and understanding, and for consistency with the 2009 CRCPD Part B model rule.

Changes to Section 2.4.1(2)

- Section 2.4.1(2) is amended to include reaffirming and clarifying language that facility registrations are an annual process, consistent with current practice and the current annual fee payment cycle in Part 12 of the regulations.

Changes to Section 2.4.5.4

- Section 2.4.5.4 pertains to mammographers (operators of x-ray imaging systems for mammography imaging) and is amended to improve the clarity and intent of the rule consistent with current practices and requirements and in conjunction with parallel changes to Appendix 2M. The rule is clarified to indicate that Appendix 2M will be used solely for the registration of individuals who are in training to become qualified mammographers (known as “provisional mammographers”) and Section 2.4.5.4 will provide requirements for individuals who are considered qualified mammographers.

Section 2.4.5.4 currently provides requirements for individuals who are in training to become fully qualified and nationally registered mammographers consistent with state and federal requirements. Under current rule, individuals in training are required to register with the department as “provisional mammographers” until they become nationally certified and registered. We are revising 2.4.5.4 and the associated Appendix 2M to improve the clarity and understanding of the requirements and to follow current processes for registration used by the department. We are not making any changes to the overall requirements with this proposed change.

Changes to Section 2.4.5.5

- Section 2.4.5.5 is being revised to clarify requirements pertaining to fluoroscopy operators and incorporate qualified individuals as fluoroscopy operators under the

revised Appendix 20, as these individuals are not adequately captured by the current rule. The added language of 2.4.5.5 and subsections will allow the department additional flexibility in implementing the rule for individuals who do not fall within the current criteria for fluoroscopy operators.

Changes to Section 2.5 and Table 2-1

- Section 2.5 and Table 2-1 are being updated to align and ensure consistency between the text of the rule and table. This section of the rule provides the certification evaluation (routine inspection) frequencies for all radiation machine types. There has been some confusion with regard to the timing of certification evaluations (inspections) for new machine installations versus already installed machines and whether a machine can be used for imaging exams prior to inspection. New installations of certain machines including Computed Tomography and Mammography systems require inspection prior to use on humans, while other systems may be used on humans following initial installation and testing by the manufacturer or service company. All systems are required to have a certification evaluation completed within 90 days of installation. We are proposing updates to section 2.5 to clarify the existing requirements and improve understanding. There is no change to the current frequency of certification evaluations (inspections) with these updates.

Changes to Section 2.5.2.2

- We are clarifying Section 2.5.2.2 to restate a statutory requirement that notification to the department is required within 3 days for machines that fail requirements. State statute has required this notification for many years.

Changes to Section 2.6.1.4

- We are adding examinations of the abdomen to section 2.6.1.4 as an imaging procedure that may be performed by department registered limited scope operators (LSOs). This is consistent with current practice in Colorado facilities that train and employ LSOs. Limited scope operators must continue to adhere to the requirements of 2.6.1.4(2).

Changes to Section 2.6.1.6

- We are revising Section 2.6.1.6, consistent with parallel changes to Appendix 2M. Language is added to clarify that registered provisional mammographers in training can operate machines while under the specified level of supervision. While an individual is undergoing training, the rule specifies that personal (in the room) supervision is required for the initial 20 exams and direct supervision is required after the initial exams, consistent with federal Mammography Quality Standards Act (MQSA) requirements.

Changes to Appendix 2D, Section 2D.2.2

- In parallel with the change in 2.6.1.4 discussed above, we are clarifying the supervision requirements for Limited Scope Operators (LSOs) who are in training, to be consistent with how students are taught and how they operate in x-ray facilities that employ LSO's. We are updating 2D.2.2 of Appendix 2D to reflect that direct (in the facility) supervision is required rather than personal (in the exam room) supervision. The direct supervision and personal supervision terms are defined in Section 2.2 and Part 1.

Changes to Appendix 2F, Section 2F.2.4

- We are deleting the reference to the passing score for the American Registry of Radiologic Technologists (ARRT) Bone Densitometry Equipment Operators (BDEO) exam in Section 2F.2.4 of the rule. The ARRT, not the department, determines the passing score for the BDEO exam. Also, the ARRT recently provided notification that they are transitioning to a “scaled score” for most testing results rather than a percentage based scoring. Removing the current “percent” based passing score value from Part 2 will eliminate any future conflict between the rule and ARRT passing scores.

Changes to Appendix 20

- The 2019-20 amendment to Part 2 added a fluoroscopy operator registration process for properly trained and qualified Physician Assistants (PA's) and Advanced Practice Registered Nurses (APRN's) to become operators of fluoroscopy systems, consistent with their scope of practice and licensing. The 2019-20 changes did not, at the time, recognize some other allied healthcare personnel who have and continue to provide various levels of support involving fluoroscopy systems as part of a medical procedure in cardiac catheterization labs throughout Colorado.

Appendix 20 is revised to incorporate into the existing fluoroscopy registration process, fully qualified and nationally certified cardiac catheterization lab (“cath lab”) professionals who meet similar training and experience requirements as PAs and APRNs as outlined in current rule. Presently, these cath lab personnel are evaluated on an individual basis and may be granted registration as fluoroscopy operators when appropriate. The proposed rule changes would streamline this process by recognizing the cardiac cath lab personnel in regulation, and reflect the current state of practice at facilities in Colorado.

Appendix 20 continues to require that operation of fluoroscopy machines be in accordance with the operator's level of training, their respective scope of practice and under the appropriate level of supervision.

Part 6

Part 6 is specific to x-ray machine use in the healing arts (medical use) for diagnostic purposes and contains requirements for periodic testing, quality control, and requirements for operation of x-ray machines at medical facilities to help ensure they are safe for patients, operators and members of the public.

Changes to the Part 6 rule are being proposed to incorporate and align with related changes associated with the Part 2 rule surrounding fluoroscopy operators, and to clarify that purposeful exposure to living human research subjects for research purposes is to be authorized by specified individuals and meet certain additional requirements of Part 2. Language is revised to incorporate more consistent language and to streamline and reduce redundancy in language regarding the frequency and conditions for routine certification evaluations (machine inspections) by deferring to Part 2 for those requirements. The provision in current rule requiring the use of rectangular collimators for most dental intraoral imaging procedures by 2025 is removed due, primarily, to the discontinued manufacturing/lack of availability on the market of universal add-on collimator devices.

Summary of Part 6 changes by section

Changes throughout Part 6

- Minor formatting updates and corrections are made to Part 6.

Changes to Section 6.1

- Rulemaking adoption and effective dates and links to regulatory web pages are updated for the current rulemaking.

Changes to Section 6.3.1.6

- We are adding provision (4) to section 6.3.1.6 to allow machine operation by specific department registered fluoroscopy operators meeting the applicable Appendix 20 requirements. More specifically, and as outlined in changes proposed for Part 2, the change permits trained and qualified, nationally certified cardiac catheterization lab personnel to register as fluoroscopy operators.

Changes to Section 6.3.1.7

- We are adding language to section 6.3.1.7 to clarify that Part 6 applies to research uses of x-ray machines when it involves purposeful exposure to living human research subjects.

Changes to Section 6.5.12.1

- We are rephrasing section 6.5.12.1 to clarify that operation of fluoroscopy systems shall be done under direct (i.e., in the building) supervision, except where it is otherwise specified in regulation. The scope of practice for fluoroscopy operators varies and may require a higher or lower level of supervision or autonomy during operation. By deferring to other parts of the regulations, including those that require following the applicable scope of practice, allows flexibility in the rule.

Changes to Section 6.5.14.1

- We are revising section 6.5.14.1 to remove redundant language for certification evaluations (inspections) of fluoroscopy machines, and instead will defer to Part 2 for these requirements.

Changes to Section 6.6.1.2

- For consistency in terminology used in the rule, in 6.6.1.2 and throughout other sections of the rule, we are modifying the language to use "inspection" instead of "testing".

Changes to Section 6.7.2.3(3)(b)

- We are proposing to rescind provision 6.7.2.3(3)(b) that requires rectangular collimators when performing most intraoral dental imaging procedures. This provision was added during the 2019-20 rulemaking with an effective date of January 1, 2025. To our knowledge, Colorado is currently the only state to require the use of rectangular collimators for routine dental intraoral imaging. Due to a lack of market availability for universal add-on type collimator devices along with implementation concerns that may be needed to meet FDA requirements when using such devices, implementation and compliance by January 1, 2025 is believed to be unfeasible at this time. Refer to additional information below for further details.

Background and basis for rectangular collimators and past rulemaking

The 2019-20 rulemaking for Part 6 incorporated a requirement for use of rectangular collimators in routine dental intra-oral imaging at the suggestion of stakeholders to help reduce patient dose. The U.S. Food and Drug Administration (FDA), has estimated that intraoral imaging is the most common x-ray image taken in dentistry with over 100 million imaging exams taken each year in the United States^a. While dental intraoral imaging is common with most patients being imaged on an annual basis (as determined by the dental practitioner), patient effective dose from such imaging is low when using modern digital based systems (typically between 0.1 and 0.8 millirem^c) and studies show it is reduced further when using rectangular collimators. Modern dental intraoral imaging systems commonly use a rectangular image receptor (digital or film), but the most common x-ray collimators - devices which shape the x-ray beam as it exits the tube head - continue to be round. A round x-ray beam combined with the rectangular image receptor results in a mismatch of the shapes resulting in dose to the patient that does not contribute to the image. As noted in the [2019-20 Part 6 rulemaking package](#)^b (that added the rectangular collimator requirement to current rule), the American Dental Association (ADA) report in 2006 suggested that patient dose can be reduced by up to fivefold for the most common radiographs. Other studies have generally confirmed dose reductions by 50% or more when using rectangular collimators. The effective doses from a typical intraoral exam represent approximately 0.1% of the annual average background dose of 620 mrem^d to individuals in the U.S. and contribute 0.2% of the annual average dose from medical procedures^d.

In June of 2022 and as a follow up to the 2019-20 Part 6 rulemaking and previous Board of Health request, the x-ray certification unit developed and sent a survey to dental facilities to evaluate the current implementation status and to help identify barriers to compliance and implementation for rectangular collimators at registered facilities. The survey was sent to approximately 2,707 dental registrants in Colorado and approximately 7.3% (198) registrants responded to the survey. Survey results are summarized in Table 1 below.

Table 1. Summary of rectangular collimator key survey results sent to dental facilities in June 2022. Note that some percentage numbers have been rounded.

Rectangular collimator survey question	Response of those participating in survey
1. Regarding which method the facility intends to use to implement the rectangular collimator requirement:	<ul style="list-style-type: none"> • 83% of respondents intend to use an add-on rectangular collimator device • 12% of respondents intend to use a combination of new machine replacement and add-on collimators • 5% of respondents intend to replace the entire machine
2. Regarding the key barriers or concerns to implementing the rectangular collimator requirement:	<ul style="list-style-type: none"> • 47% of respondents indicated that cost was the primary barrier • 12% of respondents noted no foreseen barriers • 11% of respondents were unaware of the requirement • 8% of respondents noted that training was a concern • 22% of respondents indicated that other items/issues were a barrier, including supply availability, other concerns, or did not believing in the science behind the use of rectangular collimators.
3. Regarding whether respondents were familiar with the new (2019-20 rulemaking) requirement for rectangular collimators:	<ul style="list-style-type: none"> • 46% were somewhat familiar with the requirement • 36% of facilities were not familiar with the requirement • 17% were very familiar with the requirement
4. Regarding the number (~fraction) of rectangular collimators a respondent has already installed on the facilities machines:	<ul style="list-style-type: none"> • 92% of respondents indicated that no collimators are installed on their machines • 6% of respondents indicated that all machines have collimators installed • 2% of respondents indicated that $\frac{1}{2}$ of machines have collimators installed • 1% of respondents indicated that $\frac{1}{4}$ of machines have collimators installed
5. Regarding whether the facility considers itself to be in an underserved / under resourced community:	<ul style="list-style-type: none"> • 72% of respondents indicated that they did not consider their facility to be in an under resourced community • 20% of respondents indicated that they considered their facility under resourced in a rural community • 8% of respondents indicated that they considered their facility under resourced in an urban community

Discussion of collimator survey results

Overall, the survey results indicate that most (63%) of respondents were at least familiar with the requirement for rectangular collimators in the current rule with the provision having a 2025 effective date. Despite this, less than 10% of respondents indicated that they had installed rectangular collimators on one or more machines, and a high number - 92% - of respondents indicated they had not installed rectangular collimators on any machine. This later issue is of concern due to current 2025 effective date for this requirement along with device availability in sufficient quantities.

While most questions in the survey were multiple choice, question 2 above was “open ended” allowing for specific text input and feedback from stakeholders regarding the barriers to implementation. Respondents most frequently cited that there would be an increase in “cone cuts” (cutting off portions of the image due to a smaller radiation field and need for greater accuracy), resulting in having to repeat some images. Repeating images is something that should be avoided with any radiographic imaging in general as each image contributes to radiation dose. However, if rectangular collimator devices are used and are able to reduce exposure by half (or more) to begin with, repeating even 25% of the images will still result in a potential lower total dose to the patient by about a third (36%). Data shows that rectangular collimators appear to have a greater than 50% dose reduction, in which case the overall total patient dose reduction will be even larger, even accounting for some repeat images. At least one retrospective study has shown that some images with cone cuts may still contain adequate diagnostic information.

When the collimator provision was initially proposed in the prior rulemaking, the department felt that the most cost-effective approach to implementing rectangular collimators was for facilities to purchase one or more universal add-on type collimator devices that could be easily installed by the operator on existing x-ray machines. This approach was thought to allow flexibility, where collimators could be removed by the operator to perform any specialized wide view imaging, such as for endodontic procedures. At the time of the original rulemaking, such devices appeared to be readily available on the market with multiple websites advertising them at a cost of around \$150 per unit. For an average dental registrant having three intraoral machines, the total cost would be on the order of \$450 per facility. The option to purchase fewer universal add-on collimator devices that could be shared amongst machines was also a consideration and is not prohibited by the 2020 rule. To use rectangular collimator devices properly it was recognized in the prior rulemaking that facilities would need to spend some time training on the new collimators due to tighter alignment tolerances and need for greater accuracy.

Basis for current rulemaking change with regard to rectangular collimators

While the radiation program continues to support the science and principles behind the use of rectangular collimators for most common dental intraoral imaging procedures, and believes it would contribute to overall patient dose reduction in the long run, some additional challenges have arisen with regard to facilities being able to achieve compliance with the pending 2025 requirement.

CDPHE staff members performed a comprehensive search for all distributors and manufacturers of the universal add-on collimator devices and subsequently contacted each one to assess the availability of the devices. The distributors and manufacturers

have universally indicated that the add-on collimator devices envisioned by the current rule have been discontinued, are no longer being manufactured, and are not available for purchase on the open market. While some web sites continue to advertise the devices, the reality is that they are not available.

In an effort to expand the alternatives to help achieve compliance with the current collimator provision, dental x-ray positioning indicator device (PIDs) that incorporate a rectangular collimation component were considered and included in the department outreach to manufacturers and distributors. Unfortunately, all of these devices identified have also been discontinued and are no longer being manufactured. While there were limited quantities found to be available for purchase, there were less than 10 total confirmed to be available. Considering the roughly 8,000 machines in approximately 2,700 dental facilities that would require these devices for compliance, the availability is woefully inadequate to enable compliance by 2025.

A secondary consideration regarding the ability of facilities to comply with the rule relates to compliance with federal rules which apply to x-ray machine manufacturing and certification. Within the past year since initiating the current rulemaking effort, the radiation program reached out to our partners in the U.S. Food and Drug Administration (FDA). The FDA regulates the design aspects of radiation-emitting products including x-ray machines prior to distribution in the United States. Our discussions with FDA indicate that universal add-on rectangular collimator devices envisioned in the 2019-20 rulemaking would constitute a modification of the x-ray machine. This could additionally present additional cost burden on the regulated facilities in the form of service provider or qualified inspector fees associated with testing of the machines to confirm compliance with the federal standards.

The department continues to maintain the position that measures taken to reduce dose when reasonably achievable are desirable and consistent with the As Low As Reasonably Achievable (ALARA) concept in radiation protection. However, the current challenges to acquiring the equipment to achieve compliance cannot be ignored. The idea of rule of law should also be considered during the creation and maintenance of regulations and an important aspect of this concept is that a regulated community should be required to comply with regulations with which they can and will comply. Maintaining regulations that cannot and will not be complied with serves to erode the validity of the regulations and the communities respect for the regulatory program as a whole. As a public health agency, CDPHE intends to continue to strive for reductions in radiological dose to all Colorado residents and will encourage all strategies associated with dose reduction through continued education and guidance. As a regulatory body it would be detrimental to the overall program to retain requirements that would result in widespread noncompliance and as such we believe that it is necessary to remove the current rectangular collimator requirement at this time.

REFERENCES:

^a Dental Radiography: Doses and Film Speed, U.S. Food and Drug Administration (<https://www.fda.gov/radiation-emitting-products/nationwide-evaluation-x-ray-trends-next/dental-radiography-doses-and-film-speed>), accessed 10/25/2023)

^b 6 CCR 1007-1, Part 6, X-ray in the healing arts, [2019-20 Part 6 rulemaking package, Colorado Secretary of State, eDocket tracking # 2019-00555](#). Adopted 11/20/2019, effective 1/14/2020.

^c Radiation doses in dental radiology, The International Atomic Energy Agency, (<https://www.iaea.org/resources/rpop/health-professionals/dentistry/radiation-doses>, accessed 11/02/2023)

^d Doses in Our Daily Lives, U.S. Nuclear Regulatory Commission (<https://www.nrc.gov/about-nrc/radiation/around-us/doses-daily-lives.html>, accessed 11/02/2023)

Specific Statutory Authority.**Statutes that require or authorize rulemaking:**

25-1.5-101(1)(k), 25-1.5-101(1)(l), 25-11-103, 25-11-104, and 25-1-108, C.R.S.

Is this rulemaking due to a change in state statute?

_____ Yes, the bill number is _____. Rules are ____ authorized ____ required.

XX No

Does this rulemaking include proposed rule language that incorporate materials by reference?

XX Yes

XX URL

_____ No

Does this rulemaking include proposed rule language to create or modify fines or fees?

_____ Yes

XX No

Does the proposed rule language create (or increase) a state mandate on local government?

XX No.

- The proposed rule does not require a local government to perform or increase a specific activity for which the local government will not be reimbursed;
- The proposed rule requires a local government to perform or increase a specific activity because the local government has opted to perform an activity, or;
- The proposed rule reduces or eliminates a state mandate on local government.

_____ Yes.

This rule includes a new state mandate or increases the level of service required to comply with an existing state mandate, and local government will not be reimbursed for the costs associated with the new mandate or increase in service.

The state mandate is categorized as:

_____ Necessitated by federal law, state law, or a court order

_____ Caused by the State's participation in an optional federal program

_____ Imposed by the sole discretion of a Department

Has an elected official or other representatives of local governments disagreed with this categorization of the mandate? ____Yes XNo. If "yes," please explain why there is disagreement in the categorization.

Please elaborate as to why a rule that contains a state mandate on local government is necessary.

For consistency with the national framework for regulation of sources of radiation, all facilities regardless of ownership, must adhere to the same or equally protective public health and safety requirements and regulations for possession and use of radiation sources in Colorado. The proposed rule changes result in requirements that will equally

impact all types of persons who may possess, operate, or service radiation machines whether private, or governmentally owned or operated.

DRAFT REGULATORY ANALYSIS

6 CCR 1007-1, Part 02, Registration of radiation machines, facilities and services
6 CCR 1007-1, Part 06, X-ray imaging in the healing arts;

1. A description of the classes of persons affected by the proposed rule, including the classes that will bear the costs and the classes that will benefit from the proposed rule.

The persons affected by any given proposed change will depend, largely, on the type of x-ray machine in use or the type of facility, with the majority of changes impacting medical use facilities and/or certain operators.

Group of persons/entities affected by the Proposed Rule changes	Size of the Group	Relationship to the Proposed Rule Select category: C/CLG/S/B
Medical use facility registrants (excluding dental facilities)	Approximately 2,100	C
Registered Dental facilities	Approximately 2,700	C
Limited Scope Operators (LSOs) - registered	338	C
Limited Scope Operator (LSOs) - applicants	Approximately 25 applications received per month, some of which are cath lab personnel;	C
Provisional mammographers - currently registered ^e	55	C
Future Fluoroscopy operator - applicants	Approximately 2 applications per month or 24 per year	C
Other stakeholders who requested notification of proposed x-ray related radiation rule changes. This includes private organizations, professional societies and companies.	Approximately 700	S
Private companies that manufacture or sell/distribute rectangular collimator devices on the open market. This would include companies both inside and outside of Colorado.	Unknown	S

^e The provisional mammographer registration with the department is a short term registration that is limited to 1 year, with the option to extend by a one additional year. Typically, after 1-2 years, the individual will become nationally certified and registered with ARRT to become a fully qualified mammographer (ARRT(R)(M)) and the provisional mammography status is no longer needed.

While all are stakeholders, groups of persons/entities connect to the rule and the problem being solved by the rule in different ways. To better understand those different relationships, the following relationship categorization key is used:

C = individuals/entities that implement or apply the rule.
CLG = local governments that must implement the rule in order to remain in compliance with the law.

- S** = individuals/entities that do not implement or apply the rule but are interested in others applying the rule.
- B** = the individuals that are ultimately served, including the customers of our customers. These individuals may benefit, be harmed by or be at-risk because of the standard communicated in the rule or the manner in which the rule is implemented.

More than one category may be appropriate for some stakeholders.

2. To the extent practicable, a description of the probable quantitative and qualitative impact of the proposed rule, economic or otherwise, upon affected classes of persons.

Economic outcomes

Summarize the financial costs and benefits, include a description of costs that must be incurred, costs that may be incurred, any Department measures taken to reduce or eliminate these costs, any financial benefits.

Financial/economic costs:

C and CLG:

1. The registration of certain qualified fluoroscopy operators took effect in 2021, following the 2019-20 rule amendments to Part 2 and Part 6. Certain fluoroscopy operator applicants (physician assistants and advanced practice registered nurses) are addressed specifically under the current rule, while others are evaluated on a case-by-case basis. The proposed rule changes in 2.4.5.5, and Appendix 20 will incorporate nationally certified and registered cardiac catheterization lab personnel as fluoroscopy operators under current requirements rather than evaluate them on a case by case basis, reflecting the current practice in the field. This will require these individuals to submit a registration application with the specified \$60 application fee. As noted earlier, the department currently receives only 1-2 applications per month for fluoroscopy operator registration. With the proposed change, this number may increase.
2. Removing the current requirement for rectangular collimators could result in a financial/economic cost in terms of revenues lost by companies that manufacture and distribute the devices. Assuming that 4,000 rectangular collimators were purchased for roughly half of the 8,000 dental intraoral imaging machines in Colorado at a cost of \$150 per unit, it would result in net sales of around \$360k assuming a 40% markup. Net sales would be shared among numerous companies inside and outside of Colorado to varying extents. However, this may be moot since devices are not available on the open market.

There are no expected financial/economic costs for the remainder of the proposed changes to either Part 2 or Part 6, as changes consist of language clarifications and updates of current requirements and processes.

Financial/economic benefits:

Certain X-ray registrants are expected to have an economic/financial benefit where the elimination or easing of applicable requirements will require less resources. Eliminating the rectangular collimator provision in Part 6 is expected to result in a financial benefit (cost savings) for most dental facilities since they would no longer need to implement that requirement by January 1, 2025. Not purchasing collimators saves about \$150 per machine and about \$450 for the average facility with 3 machines. There are approximately 8,000 intraoral dental imaging machines in Colorado. If collimators were shared among machines and a total of only 4,000 collimators are purchased by facilities state-wide, the gross cost savings would be on the order of \$600k (\$150 per collimator x 4,000 machines).

There are no expected financial/economic benefits for the remainder of the proposed changes to either Part 2 or Part 6, as changes consist of language clarifications and updates of current requirements and are not a change to current processes.

Please describe any anticipated financial costs or benefits to these individuals/entities.

S: As a result of eliminating the rectangular collimator requirement, some organizations representing the dental community may want to develop and issue revised communications for their membership. This would likely involve minimal resources to be expended by any given organization.

B: While the majority of proposed changes do not directly impact the end recipient of services of registered x-ray facilities (such as patients at medical facilities), the elimination of the requirement for rectangular collimators could monetarily benefit the end user patient in a very small way. Without the requirement for dental intraoral collimators, patients who receive dental intraoral imaging services would not realize a cost increase for the purchase of the collimators by the facility which are passed on to the patient. However, due to the low cost of the collimators (as outlined earlier) the cost on a per patient basis would expect to be miniscule.

Non-economic outcomes

Summarize the anticipated favorable and non-favorable non-economic outcomes (short-term and long-term), and, if known, the likelihood of the outcomes for each affected class of persons by the relationship category.

C/CLG: The overall anticipated favorable outcome for the proposed changes to the Part 2 and Part 6 rules, will be improved clarity and understanding of the regulations and requirements by the regulated community and radiation program staff. The incorporation of nationally registered and certified cardiac cath lab personnel as registered fluoroscopy operators is expected to be a benefit to facilities and applicants for registration since current rules do not recognize these individuals as fluoroscopy operators. Since many of these individuals are already working in cardiac cath labs, this will allow a clearer pathway to compliance.

B:

1. A possible favorable outcome with the elimination of the rectangular collimator requirement for entities that represent the dental community, will be that they would not necessarily need to spend additional time helping their clients find ways to achieve compliance.

S:

1. Elimination of the rectangular collimator requirement, is a non-favorable outcome that will result in no additional dose savings for patients who receive imaging from intraoral dental systems.
2. The incorporation of RCIS individuals to the current fluoroscopy registration process is a favorable outcome expected to benefit the end user patient who undergoes cardiac cath lab procedures. The proposed rule language helps ensure that individuals operating fluoroscopy machines have sufficient training and certifications necessary for safe operation during patient exams.
3. The remaining proposed changes are primarily technical and clarification changes and not expected to have any direct or indirect impact or outcomes for the end user.

3. The probable costs to the agency and to any other agency of the implementation and enforcement of the proposed rule and any anticipated effect on state revenues.

A. Anticipated CDPHE personal services, operating costs or other expenditures:

There may be some minor additional personal services expended as a result of an increase in fluoroscopy operator applications, beyond those currently received. As noted earlier, the radiation program typically receives about 2 fluoroscopy operator applications per month on average. Even with an increase in numbers of fluoroscopy registration applications received, it is expected they can be absorbed into current resources and funding levels.

Anticipated CDPHE Revenues:

With regard to the proposed provision to incorporate cath lab personnel into the current fluoroscopy operator registration process, there may be some negligible amount of additional revenue due to an increase in fluoroscopy operator registration applications. The number of applicants is not easily predictable, however, but assuming the number of applications received doubles from the current 2 per month to 4 per month would result in an additional \$120 per month (\$1,440 per year) of revenue.

All other proposed changes to Part 2 and Part 6 are not expected to impact CDPHE revenues.

B. Anticipated personal services, operating costs or other expenditures by another state agency: Not Applicable

Anticipated Revenues for another state agency: Not Applicable

4. A comparison of the probable costs and benefits of the proposed rule to the probable costs and benefits of inaction.

Along with the costs and benefits discussed above, the proposed revisions:

- ☒ Comply with a statutory mandate to promulgate rules.
- ☒ Comply with federal or state statutory mandates, federal or state regulations, and Department funding obligations.
- ☒ Maintain alignment with other states or national standards.
- ☒ Implement a Regulatory Efficiency Review (rule review) result
- ☒ Improve public and environmental health practice.
- ☒ Implement stakeholder feedback.

Advance the following CDPHE Strategic Plan priorities (select all that apply):

1.	Reduce Greenhouse Gas (GHG) emissions economy-wide from 125.716 million metric tons of CO ₂ e (carbon dioxide equivalent) per year to 119.430 million metric tons of CO ₂ e per year by June 30, 2020 and to 113.144 million metric tons of CO ₂ e by June 30, 2023.
<input type="checkbox"/>	Contributes to the blueprint for pollution reduction
<input type="checkbox"/>	Reduces carbon dioxide from transportation
<input type="checkbox"/>	Reduces methane emissions from oil and gas industry
<input type="checkbox"/>	Reduces carbon dioxide emissions from electricity sector
2.	Reduce ozone from 83 parts per billion (ppb) to 80 ppb by June 30, 2020 and 75 ppb by June 30, 2023.
<input type="checkbox"/>	Reduces volatile organic compounds (VOC) and oxides of nitrogen (NO _x) from the oil and gas industry.
<input type="checkbox"/>	Supports local agencies and COGCC in oil and gas regulations.
<input type="checkbox"/>	Reduces VOC and NO _x emissions from non-oil and gas contributors
3.	Decrease the number of Colorado adults who have obesity by 2,838 by June 30, 2020 and by 12,207 by June 30, 2023.
<input type="checkbox"/>	Increases the consumption of healthy food and beverages through education, policy, practice and environmental changes.
<input type="checkbox"/>	Increases physical activity by promoting local and state policies to improve active transportation and access to recreation.
<input type="checkbox"/>	Increases the reach of the National Diabetes Prevention Program and Diabetes Self-Management Education and Support by collaborating with the Department of Health Care Policy and Financing.
4.	Decrease the number of Colorado children (age 2-4 years) who participate in the WIC Program and have obesity from 2120 to 2115 by June 30, 2020 and to 2100 by June 30, 2023.
<input type="checkbox"/>	Ensures access to breastfeeding-friendly environments.
5.	Reverse the downward trend and increase the percent of kindergartners protected against measles, mumps and rubella (MMR) from 87.4% to 90% (1,669 more kids) by June 30, 2020 and increase to 95% by June 30, 2023.
<input type="checkbox"/>	Reverses the downward trend and increase the percent of kindergartners protected against measles, mumps and rubella (MMR) from 87.4% to 90% (1,669 more kids) by June 30, 2020 and increase to 95% by June 30, 2023.
<input type="checkbox"/>	Performs targeted programming to increase immunization rates.
<input type="checkbox"/>	Supports legislation and policies that promote complete immunization and exemption data in the Colorado Immunization Information System (CIIS).
6.	Colorado will reduce the suicide death rate by 5% by June 30, 2020 and 15% by June 30, 2023.
<input type="checkbox"/>	Creates a roadmap to address suicide in Colorado.
<input type="checkbox"/>	Improves youth connections to school, positive peers and caring adults, and promotes healthy behaviors and positive school climate.
<input type="checkbox"/>	Decreases stigma associated with mental health and suicide, and increases help-seeking behaviors among working-age males, particularly within high-risk industries.
<input type="checkbox"/>	Saves health care costs by reducing reliance on emergency departments and

connects to responsive community-based resources.	
7.	<p>The Office of Emergency Preparedness and Response (OEPR) will identify 100% of jurisdictional gaps to inform the required work of the Operational Readiness Review by June 30, 2020.</p> <ul style="list-style-type: none"> ___ Conducts a gap assessment. ___ Updates existing plans to address identified gaps. ___ Develops and conducts various exercises to close gaps.
8.	<p>For each identified threat, increase the competency rating from 0% to 54% for outbreak/incident investigation steps by June 30, 2020 and increase to 92% competency rating by June 30, 2023.</p> <ul style="list-style-type: none"> ___ Uses an assessment tool to measure competency for CDPHE's response to an outbreak or environmental incident. ___ Works cross-departmentally to update and draft plans to address identified gaps noted in the assessment. ___ Conducts exercises to measure and increase performance related to identified gaps in the outbreak or incident response plan.
9.	<p>100% of new technology applications will be virtually available to customers, anytime and anywhere, by June 20, 2020 and 90 of the existing applications by June 30, 2023.</p> <ul style="list-style-type: none"> ___ Implements the CDPHE Digital Transformation Plan. ___ Optimizes processes prior to digitizing them. ___ Improves data dissemination and interoperability methods and timeliness.
10.	<p>Reduce CDPHE's Scope 1 & 2 Greenhouse Gas emissions (GHG) from 6,561 metric tons (in FY2015) to 5,249 metric tons (20% reduction) by June 30, 2020 and 4,593 tons (30% reduction) by June 30, 2023.</p> <ul style="list-style-type: none"> ___ Reduces emissions from employee commuting ___ Reduces emissions from CDPHE operations
11.	<p>Fully implement the roadmap to create and pilot using a budget equity assessment by June 30, 2020 and increase the percent of selected budgets using the equity assessment from 0% to 50% by June 30, 2023.</p> <ul style="list-style-type: none"> ___ Used a budget equity assessment ___ Advance CDPHE Division-level strategic priorities.

The costs and benefits of the proposed rule will not be incurred if inaction was chosen. Costs and benefits of inaction not previously discussed include:

The cost of inaction for most of the proposed changes will result in Colorado regulations being less clear and understandable. Most of the proposed changes involve revising, rewording or rearranging existing requirements.

With regard to the proposed elimination of the rectangular collimator provision in 6.7.2.3(3)(b), the cost of inaction (e.g., retaining the requirement with the current effective date of January 1, 2025) will likely be that a vast majority of regulated entities will be in a state of non-compliance due to unavailability of devices to purchase on the open market.

With regard to the incorporation of cath lab specialists into the fluoroscopy registration process (2.4.5.5, Appendix 20, and 6.3.1.6), inaction on these changes will result in cath lab specialists continuing to be out of compliance with the current regulations. RCIS individuals are not currently recognized or addressed by the current rule as operators of fluoroscopy systems.

5. A determination of whether there are less costly methods or less intrusive methods for achieving the purpose of the proposed rule.

Rulemaking is proposed when it is the least costly method or the only statutorily allowable method for achieving the purpose of the statute. The specific revisions proposed in this rulemaking were developed by radiation program staff and with consideration of feedback from stakeholders and in consideration of the feasibility and likelihood of achieving full compliance. The benefits, risks and costs of these proposed revisions were compared to the costs and benefits of other options. The proposed revisions provide the most benefit for the least amount of cost, are the minimum necessary or are the most feasible manner to achieve compliance.

6. Alternative Rules or Alternatives to Rulemaking Considered and Why Rejected.

No alternative rules or alternative rulemaking was considered for the majority of the proposed rule changes which are primarily based on the need for additional clarity and understanding in the rule as expressed by stakeholders (and staff), and the need to incorporate certain qualified fluoroscopy operators who are not currently addressed by the regulations.

Following our stakeholder process, and with regard to the proposal to rescind the rectangular collimator requirement for dental intraoral imaging systems in Part 6, several alternative approaches were considered and evaluated.

- One alternative considered was to retain the current rectangular collimator requirement and due date of January 1, 2025 without revision.
 - As discussed earlier and following stakeholder feedback from the 2022 dental facility survey, collimator device availability on the open market is a significant concern. Recently, Division staff performed a search for all distributors and manufacturers of the universal add-on collimator devices or similar shielding devices and subsequently contacted each one to assess the availability of the devices. The distributors and manufacturers have universally indicated that the add-on collimator devices envisioned by the current rule have been discontinued, are no longer being manufactured, and are not available for purchase on the open market. While some web sites continue to advertise the devices, the reality is that they are not available.
- Another alternative considered was to revise the current requirement to extend the due date beyond the current January 1, 2025 date to allow for additional implementation time and market availability of universal add-on collimator devices or other devices that meet the intent and purpose of these collimators.
 - This alternative was rejected primarily due to a lack of market availability of add-on collimator devices. While some regulations may drive market availability, in this instance, that does not appear to be happening. Open market availability of certain equipment or devices required by regulation is

something not under the direction or control of the Division.

- At the suggestion of a stakeholder, the Division also considered modifying the existing rule language to require that all new intraoral dental imaging systems installed after at a future date (to be determined), would be required to have rectangular collimators inherent as part of the tube assembly design.
 - This alternative was rejected since it was felt that there would be insufficient time to research this alternative and gain additional stakeholder feedback under the current rulemaking schedule. The Division would need more time to assess the market availability of this type of system and the associated economic impacts of such a requirement. An additional confounding issue involves implementation concerns expressed by stakeholders where certain imaging studies need a wider field of view. Systems with fixed rectangular collimators would not allow the flexibility of the originally envisioned universal add-on type collimators. This could potentially limit the care provided by a given dental facility with only one machine.

7. To the extent practicable, a quantification of the data used in the analysis; the analysis must take into account both short-term and long-term consequences.

As outlined earlier, the data gathered during the 2022 dental facility survey indicated that a high percentage (over 90%) of dental facilities have not yet implemented the use of rectangular collimators at their facilities, since being added to rule in 2020. This is in spite of department and stakeholder organization efforts to communicate the pending requirement.

STAKEHOLDER ENGAGEMENT

for Amendments to

6 CCR 1007-1, Part 02, Registration of radiation machines, facilities and services
6 CCR 1007-1, Part 06, X-ray imaging in the healing arts

State law requires agencies to establish a representative group of participants when considering to adopt or modify new and existing rules. This is commonly referred to as a stakeholder group.

Early Stakeholder Engagement:

The following individuals and/or entities were invited to provide input in the development of these proposed rules:

Organization	Representative Name and Title (if known)
Approximately 5,259 x-ray registrants in Colorado representing: <ul style="list-style-type: none"> • Facilities that use x-ray devices for medical purposes; • Facilities that use x-ray devices for non-medical purposes; • Registered service companies; • Registered Qualified Inspectors and Qualified Experts. 	NA
Approximately 1,404 stakeholders with an interest in changes to rules and regulations pertaining to radiation control, including private individuals and companies, professional medical societies, associations and related organizations.	NA

In early September, stakeholders in the above identified categories or groups were notified by email of the opportunity to comment on the proposed draft rules that were posted on the department website. In addition to the initial notification, a follow-up email notice was sent reminding stakeholders of the opportunity to participate in two virtual stakeholder meetings that were held in early October 2023 and prior to the conclusion of the comment period. A total of 6 individuals attended the two stakeholder meetings. During the stakeholder process, the department received written comments from two stakeholders. The summary of those comments are discussed in further detail below.

Stakeholder Group Notification

The stakeholder group was provided notice of the rulemaking hearing and provided a copy of the proposed rules or the internet location where the rules may be viewed. Notice was provided prior to the date the notice of rulemaking was published in the Colorado Register (typically, the 10th of the month following the Request for Rulemaking).

☒ Not applicable. This is a Request for Rulemaking Packet. Notification will occur if the Board of Health sets this matter for rulemaking.

☐ Yes.

Summarize Major Factual and Policy Issues Encountered and the Stakeholder Feedback Received. If there is a lack of consensus regarding the proposed rule, please also identify the Department's efforts to address stakeholder feedback or why the Department was unable to accommodate the request.

During the comment period, there were two opposing comments provided by stakeholders. Both comments are related to the proposed elimination of the dental collimator provision in 6.7.2.3(3)(b), which is set to become effective in approximately 14 months (January 1, 2025) as identified in current rule.

Comment supporting elimination of the rectangular collimator provision

One stakeholder was in support of removing the requirement for rectangular collimators for the reasons given (in the draft rule and associated documents), but also because they believe it could lead to greater exposure to radiation due to difficulty of assistants to align the tube-head to avoid cone-cuts even with existing positioners. The commenter noted that there are other devices to help mitigate this (cone-cuts), but stated that they are costly and cumbersome. With high turnover rates in dental offices the commenter noted it would lead to a significant burden to train and motivate employees to avoid retakes.

Comment opposed to elimination of the rectangular collimator provision

One stakeholder stated their opposition to removing the proposed requirement for rectangular collimators for routine intra-oral imaging. In their comments, the stakeholder noted that the benefits of rectangular collimation for routine intraoral imaging are well established, stating that in no other application of x-rays for imaging do the regulations allow the gross misalignment of x-ray field to image receptor size. The commenter felt that the public will not be protected by the voluntary adoption of these requirements and that regulatory action is necessary. The commenter noted that in addition to the organizations identified by the department (in the 2019-20 rule package) that support rectangular collimator use, the American Academy of Oral and Maxillofacial Radiology also concurs with their use. The commenter felt that the department is acting against the recommendations of these professional associations.

The commenter opposed to eliminating the rectangular collimators provided a rebuttal to several of the statements in the informational notes in the draft rule and associated documents on the following topical areas:

- Facilities identified concerns over possible imaging errors when using rectangular collimators.

As the commenter pointed out, this topic was discussed and evaluated during the original 2019-20 rulemaking initially implementing the collimator requirement. The more recent 2022 survey of dental facilities indicates there is continued concern with this subject. Based upon the available literature, we agree that this concern may be somewhat exaggerated and that stakeholders have perhaps not fully evaluated it or reviewed technical documents, it remains a concern of stakeholders.

- The need for additional staff training and that 5 years (between the rule effective date and rectangular collimator requirement effective date) is sufficient.

We do not disagree with this observation.

- Equipment availability based on internet searches

As discussed earlier, the Division contacted multiple manufacturers and distributors of rectangular collimators. Our evaluation indicated that while some websites continue to advertise availability of the items, direct contact with these vendors indicated no current availability.

The commenter also made the following specific recommendations:

- Require that all newly installed machines after a specified date be (inherently) capable of rectangular collimation.

This option presents several challenges for the Division without further market and impact evaluations and additional stakeholder outreach and feedback considerations. Although the demand for x-ray systems with inherent rectangular collimation would likely be less, since purchases are spread out over time (as a dental facility would determine the need for new machine purchases), market availability must still be considered. The potential cost differences between rectangular vs round collimator machines systems must be evaluated further. Establishing such a machine based rectangular collimator requirement would potentially prohibit wider imaging fields and needs additional consideration.

- Maintain the 2025 deadline for rectangular collimation, but grant an automatic enforcement waiver until the next required QI evaluation, thus spreading out the purchasing wave.

Market availability for universal add-on collimation devices has not been driven by the current regulatory requirement, so (implicitly) extending this date by issuance of waivers would also not be expected to drive manufacturing and distribution. Additionally, establishing plans for an “automatic waiver” is not deemed to be a good practice from a regulatory perspective and is unlikely to drive compliance. Additionally, it’s unclear whether an evaluation performed by Qualified Inspectors (regardless of when it occurs) would meet the FDA requirements. It is our understanding that devices which alter the x-ray beam are required be certified components which typically must go through a manufacturer certification process with FDA. Despite requests from the division, both FDA and a manufacturer of a shielded x-ray Position Indicating Device (PID), have not provided information to clarify if this type of device must be a certified component. Without additional information, it is our interpretation that devices that alter the x-ray beam must be certified components.

Please identify the determinants of health or other health equity and environmental justice considerations, values or outcomes related to this rulemaking: None.

Overall, after considering the benefits, risks and costs, the proposed rule (select all that apply):

	Improves behavioral health and mental health; or, reduces substance abuse or suicide risk.	Reduces or eliminates health care costs, improves access to health care or the system of care; stabilizes individual participation; or, improves the quality of care for unserved or underserved populations.
--	--------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	Improves housing, land use, neighborhoods, local infrastructure, community services, built environment, safe physical spaces or transportation.	X	Reduces occupational hazards; improves an individual's ability to secure or maintain employment; or, increases stability in an employer's workforce.
	Improves access to food and healthy food options.	X	Reduces exposure to toxins, pollutants, contaminants or hazardous substances; or ensures the safe application of radioactive material or chemicals.
	Improves access to public and environmental health information; improves the readability of the rule; or, increases the shared understanding of roles and responsibilities, or what occurs under a rule.		Supports community partnerships; community planning efforts; community needs for data to inform decisions; community needs to evaluate the effectiveness of its efforts and outcomes.
	Increases a child's ability to participate in early education and educational opportunities through prevention efforts that increase protective factors and decrease risk factors, or stabilizes individual participation in the opportunity.		Considers the value of different lived experiences and the increased opportunity to be effective when services are culturally responsive.
	Monitors, diagnoses and investigates health problems, and health or environmental hazards in the community.		Ensures a competent public and environmental health workforce or health care workforce.
	Other: Ensures consistency with federal rule and the national framework for regulation of radioactive materials.		Other: _____ _____

DRAFT 1 11/30/2023

DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Hazardous Materials and Waste Management Division

State Board of Health

RADIATION CONTROL - REGISTRATION OF RADIATION MACHINES, FACILITIES AND SERVICES

6 CCR 1007-1 Part 02

[Editor's Notes follow the text of the rules at the end of this CCR Document.]

Adopted by the Board of Health June 16, 2024 February 21, 2024, effective date August 14, 2024 April 14, 2024

PART 2: REGISTRATION OF RADIATION MACHINES, FACILITIES AND SERVICES

2.1 Purpose and Scope.

* * *

[* * * indicates unaffected sections of the rule]

2.1.5 Published Material Incorporated by Reference.

2.1.5.1 Throughout this Part 2, federal regulations, state regulations, and standards or guidelines of outside organizations have been adopted and incorporated by reference. Unless a prior version of the incorporated material is otherwise specifically indicated, the materials incorporated by reference cited herein include only those versions that were in effect as of the most recent effective date of this Part 2 (~~October, 2020~~ April, 2024), and not later amendments or editions of the incorporated material.

2.1.5.2 Materials incorporated by reference are available for public inspection, and copies (including certified copies) can be obtained at reasonable cost, during normal business hours from the Colorado Department of Public Health and Environment, Hazardous Materials and Waste Management Division, 4300 Cherry Creek Drive South, Denver, Colorado 80246. Additionally, <https://www.colorado.gov/cdphe/radregs> identifies where the incorporated federal and state regulations are available to the public on the internet at no cost. A copy of the materials incorporated in this Part is available for public inspection at the state publications depository and distribution center.

2.1.5.3 Availability from Source Agencies or Organizations.

- (1) All federal agency regulations incorporated by reference herein are available at no cost in the online edition of the Code of Federal Regulations (CFR) hosted by the U.S. Government Printing Office, online at www.govinfo.gov <https://www.govinfo.gov/app/collection/cfr/>.

Commented [JSJ1]: Editorial note 1: All comments (such as this one) shown in the right side margin of this draft document are for information purposes only to assist the reader in understanding the proposed rule change during the review and comment process. These side margin notes are not part of the rule and all comments will be deleted prior to publication of the final rule by the Colorado Secretary of State.

Editorial note 2: Alignment and formatting corrections and minor typographical adjustments may be made in the rule and may not be specifically identified with a side margin comment.

Editorial note 3: Colorado's radiation regulations are to be consistent with the current model rules of the Conference of Radiation Control Program Director's (CRCPD), Inc. except where the Board of Health determines a deviation is necessary.

Editorial note 4: This draft is not a complete rule. Unaffected/unchanged sections or provisions have been removed from the rule and are not shown in this draft. Unaffected sections/provisions are denoted with a " * * *" and remain as-is in the current rule with no changes. Some provisions may be shown with no changes and are provided for reference purposes.

Commented [JSJ2]: The stated adoption and effective dates are tentative and subject to change, pending the Board of Health meeting schedule, preliminary acceptance by the Board, final adoption by the Board, and the Colorado Register publication dates.

The anticipated dates are based on the annual rulemaking hearing schedule (regulatory agenda) for the Department which may be found [online](#).

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- (2) All state regulations incorporated by reference herein are available at no cost in the online edition of the Code of Colorado Regulations (CCR) hosted by the Colorado Secretary of State's Office, online at <https://www.sos.state.co.us/CCR/RegisterHome.do> <https://www.sos.state.co.us/CCR/NumericalDeptList.do#1000>.
- (3) Copies of the standards or guidelines of outside organizations are available at no cost or for purchase from the source organizations listed below.
- (a) American Registry of Radiologic Technologists
 1255 Northland Drive
 St. Paul, MN 55120-1155
 Phone (651) 687-0048
[arrt.orghttps://www.arrt.org/](https://www.arrt.org/)

2.2 Definitions.

2.2.1 Definitions of general applicability to these regulations are in Part 1, section 1.2.

2.2.2 As used in Part 2, each term below has the definition set forth.

"ARRT" means the American Registry of Radiologic Technologists, 1255 Northland Drive, St. Paul, MN 55120, Phone (651) 687-0048, web site: <https://www.arrt.org/>.

"ASRT" means the American Society of Radiologic Technologists.

* * *

"Direct supervision" means the supervisor is present in the facility and immediately available to furnish assistance and direction to the supervisee throughout the performance of a procedure.

- (1) The direct supervisor is not required to be present in the room when the procedure is performed.

~~(2) Direct supervision during the performance of a mammography examination means that the supervisor is present to observe and correct, as needed, the performance of the individual being supervised who is performing the examination.~~

* * *

~~"Personal supervision" is as defined in Part 1 of the regulations.~~

~~"Provisional Mammographer" means an individual who is in-training to become a Qualified mammographer and meets the requirements of Appendix 2M.2M.2 and has current department approval to perform mammograms under direct supervision in order to meet the requirements to become a Qualified Mammographer.~~

* * *

"Qualified mammographer" means a mammographer who meets the applicable requirements of ~~Appendix 2M.2.4.5.4(1) and 2.4.5.4(2).~~

"Qualified trainer" (QT) means an individual whose training and experience adequately prepares the individual to carry out specified training assignments as illustrated in Appendix 2J.

Commented [JSJ3]:

This mammography specific language is deleted due to being addressed and clarified in the proposed changes to Appendix 2M (2M.3).

Commented [JSJ4]:

Definition is added for clarity since the definition is used in Part 2 in several instances.

Commented [JSJ5]:

This definition is updated, consistent with proposed changes to Section 2.4.5.4 and Appendix 2M. The type/level of supervision - direct versus personal - will vary during the training process for provisional mammographers and is outlined in Appendix 2M, 2M.3..

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79 "Radiology Practitioner Assistant" means an individual who is currently registered as RPA by the
 80 Certification Board for Radiology Practitioner Assistants and are designated RPA (CBRPA).

81 "Radiographic Examination" means performing a procedure, including selection of exposure
 82 settings, positioning the x-ray system and the patient, and initiating and terminating the exposure.

83 "~~Radiologic technologist~~" means an individual who is currently registered in radiologic technology
 84 with the ~~American Registry of Radiologic Technologists~~ **ARRT**. See "R.T.(CT)(**ARRT**)",
 85 "R.T.(**R**)(M)(**ARRT**)", "R.T.(N)(**ARRT**)", "R.T.(R)(**ARRT**)", and "R.T.(T)(**ARRT**)".

86 "Registered Radiologist Assistant" means an individual who is certified by the ARRT as a
 87 Registered Radiologist Assistant designated as R.R.A.-(**ARRT**).

88 "Registered medical physicist" (RMP) means an individual who meets the applicable
 89 requirements of Appendix 2I and has current Department approval to perform medical physics
 90 activities, including shielding design, performing radiation surveys, and providing consultation for
 91 radiation protection and quality assurance and clinical medical physics for radiation therapy,
 92 computed tomography, mammography and/or other healing arts facilities.

93 "~~R.T.(CT)(**ARRT**)~~" means an individual who is certified and registered by the ARRT ~~in with a~~
 94 ~~specialty post-secondary certification in~~ computed tomography. (Note: Since CT
 95 certification is a post-secondary registration and has several primary paths, the "(R)" is
 96 not included as it may vary between individuals depending on their primary certification.)

97 "R.T.(**R**)(M)(**ARRT**)" means an individual who is certified and registered by the ARRT in
 98 radiography with a specialty certification in mammography.

99 "R.T.(N)(**ARRT**)" means an individual who is certified and registered by the ARRT in nuclear
 100 medicine technology.

101 "R.T.(R)(**ARRT**)" means an individual who is certified and registered by the ARRT in radiography.

102 "R.T.(T)(**ARRT**)" means an individual who is certified and registered by the ARRT in radiation
 103 therapy.

104 * * *

106 2.3.2 Radiation machines ~~while~~ in transit or in storage incident ~~theretoto transit~~ are exempt from the
 107 requirements of Part 2.

108 * * *

110 **REQUIREMENTS FOR DEPARTMENT APPROVAL AND/OR REGISTRATION**

111 **2.4 State of Colorado Authorization or Approval Recognized by the Department is Required**
 112 **for Each Category Designated in This Section.**

113 2.4.1 Registration of a Facility.

114 2.4.1.1 Each person possessing or in the process of coming into the possession of a radiation
 115 machine facility shall:

- 116 (1) Be registered with the Department prior to using a radiation producing machine
 117 at the facility;

Commented [JSJ6]:

This and associated definitions (found below) are updated for consistency with the designations used and recommended by the American Registry of Radiologic Technologists for registered individuals.

Commented [JSJ7]:

This and associated and subsequent related definitions are updated for consistency with the designations used and recommended by the ARRT for registered individuals.

Certain registrations issued by ARRT are considered "primary" registrations and others are post-secondary registrations. Primary registrations are a path to obtain a post-secondary registration. Primary registrations include those in radiography, nuclear medicine technology, and radiation therapy. Mammography is post-secondary registration that first requires certification in radiography and is why the "(R)" designation is included. Computed Tomography (CT) registration is a post-secondary registration, and there are several primary paths to receive certification.

Commented [JSJ8]:

Language is revised for clarity and consistency with the CRCPD model rule Part B.

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- (2) Before the facility registration expiration date, **at least every twelve (12) months**, submit a complete application for registration on the applicable Department R-4 series Form, and include all of the information required by the form and any accompanying instructions. The facility shall:
- (a) Designate a radiation safety officer who meets the applicable requirements of Appendix 2A to be responsible for overall radiation protection for the facility; and
 - (b) Document that a written shielding design has been:
 - (i) Completed in accordance with Parts 6, 8, or 9 of these regulations, as applicable, prior to any radiation machine installation; and
 - (ii) Retained on file at the facility for the life of the facility.
 - (c) Pay the radiation machine facility registration fee for radiation control services indicated by Part 12, Category 26. The radiation machine facility registration fee is not required for registration updates required by 2.4.6.5 unless the update is submitted less than thirty (30) days prior to the registrant's expiration date.

2.4.1.2 As prescribed by 6.3.3.4 for a healing arts screening program, registrants shall complete and submit a Healing Arts Screening application including all of the information required by Part 6, Appendix 6F.

2.4.1.3 In addition to the other requirements of 2.4, any research using radiation machines on **living** humans shall be approved by an Institutional Review Board (IRB).

* * *

2.4.5 Registration of specific radiation machine operators.

Except as otherwise specified in these regulations, registration with the Department is not required for an individual who holds a current, valid national registry in radiography, nuclear medicine technology, radiation therapy, computed tomography or mammography as issued by the ARRT or NMTCB (with specialty certification in Computed Tomography) or other nationally recognized registry specifically accepted by the Department. Additional requirements may be applicable in accordance with Appendix 2E, Appendix 2G, Appendix 2M, or Appendix 2O. All other non-physician individuals operating x-ray imaging systems on living humans who are not nationally registered or certified by ARRT or NMTCB must meet the requirements specified in the regulations and shall register with the Department, when applicable.

* * *

2.4.5.4 Provisional Mammographer.

- (1) ~~Any individual performing mammography exams under supervision in order to meet the initial requirements of 2M.1.3 shall be registered as a Provisional Mammographer prior to performing such exams.~~
- (2) ~~The application to be registered in the State of Colorado as a Provisional Mammographer shall be submitted on the Form R-64 series application and shall~~

Commented [JSJ9]:

Clarifying language is added to help ensure registrants understand that facility registrations are required to be renewed annually. The annual facility registration process helps keep information up to date in the department registration database.

There is no change to the frequency of the registration which coincides with the annual fee payment as specified in [Part 12](#).

Commented [JSJ10]:

The word "living" is added to clarify that the use of non-living humans (i.e., cadavers) would not require IRB approval.

Commented [JSJ11]:

This section is revised in its entirety as shown/discussed below.

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contain all information required by the Department as indicated on the form(s) and all accompanying instructions.

(3) Provisional mammographer registration is issued for a period of one year.

(4) A Provisional Mammographer registration may be renewed once.

2.4.5.4 Mammographer

Any individual performing mammography shall:

(1) Be certified by the ARRT in Mammography (R.T.(R)(M)(ARRT)); and

(2) Meet the qualifications of and maintain the education and experience requirements for MQSA under 21 CFR Part 900.12(a)(2);

Or

(3) Register as a provisional mammographer, meet the requirements of Appendix 2M, and be considered to be in-training until the requirements of 2.4.5.4(1) and 2.4.5.4(2) are met.

2.4.5.5 Fluoroscopy operator

(1) On or after January 1, 2021, each individual operating a fluoroscopy imaging system on living humans shall be registered with the department as a fluoroscopy operator consistent with 2.4.5.5(2) or 2.4.5.5(3), except for:

(a) A physician who has an active license from the applicable State of Colorado licensure board consistent with the requirements of Section 2.6.1.2; or

(b) A Registered Radiologist Assistant or Radiology Practitioner Assistant (RPA) who meets the requirements of Appendix 2G; or

(c) An individual with a current R.T.(R), R.T.(CV), R.T.(CI), R.T.(VI), or R.T.(T) registration.

(2) Individuals whose training and experience has been evaluated by the department in writing prior to the effective date of the rule January 1, 2021, as having met the training and experience requirements of Appendix 2O:

(a) Need not complete the training or testing requirements of Appendix 2O.1; and

(b) Shall be required to obtain and maintain registration in accordance with 2.4.5.5(3)(b) through 2.4.5.5(3)(f) on or after January 1, 2021.

(3) Registration

(a) In order to apply for registration as a fluoroscopy operator, the applicant for fluoroscopy operator registration must complete the requirements of Appendix 2O in a structured and documented training program that meets the requirements of ARRT or another program as authorized by the regulations or as approved in writing by the department.

Commented [JSJ12]:

Section 2.4.5.4 is revised in conjunction with Appendix 2M for clarity and understanding and to reflect the current requirements and processes for qualified mammographers and those in-training as provisional mammographers.

Under the revised language, individuals are considered to be qualified mammographers and can perform exams unsupervised if they meet the requirements of 2.4.5.4(1) and 2.4.5.4(2). This is consistent with current requirements.

If individuals performing mammography do not currently have mammography certification (they do not meet 2.4.5.4(1)), and desire to become qualified mammographers, they will need to meet 2.4.5.4(3) and register as a provisional mammographer while in training in accordance with the requirements of Appendix 2M.

Commented [JSJ13]: Language is added to clarify that in this provision the registration is with the department rather than an outside certifying body.

Commented [JSJ14]:

Secondary certifications are added for clarity, and include Cardiovascular-Interventional Radiography (CV), Cardiac Interventional Radiography (CI) and Vascular Interventional Radiography (VI).

Commented [JSJ15]:

The proposed change removes the more generic language "the effective date of the rule" and replaces it with the specific date that the provision was initially introduced into the rule (as listed in (2)(b)). The provision was added to allow grandfathering of individuals to continue their use of fluoroscopy. Prior to the January 1, 2021 rule, individuals were evaluated on a case by case basis.

Commented [JSJ16]:

Language is added to conform to proposed changes in Appendix 2O, which will incorporate the registration process for certain qualified and nationally registered cardiac catheterization lab professionals who are currently being evaluated on a case by case basis.

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- 201 (b) Each fluoroscopy operator shall complete an R-50 series application
 202 form with all of the information required, together with the fee required by
 203 Part 12, Category 24.
- 204 (i) The Form R-50 series application form shall be used to confirm
 205 the completion of the requirements of Appendix 2O.
- 206 (c) Except for those individuals meeting the requirements of 2.4.5.5(2),
 207 application for registration as a fluoroscopy operator shall be made within
 208 one year ~~upon~~**following** completion of the training requirements of
 209 Appendix 2O.
- 210 (d) If an applicant cannot achieve a passing score **on the applicable**
 211 **national registration exam** per Appendix 2O, **section 2O.1.3.1 or**
 212 **2O.1.3.2** within three attempts, the applicant must restart the training
 213 required by Appendix 2O.
- 214 (e) ~~Issuance of a~~ fluoroscopy operator registration is valid for a two year
 215 period.
- 216 (f) Registrants must meet the requirements of 2O.2 in order to renew the
 217 fluoroscopy operator registration.
- 218 (i) The Form R-50 series application form shall be used to renew
 219 the fluoroscopy operator registration every two years.
- 220 (g) Reciprocal recognition of a registration or license specifically authorizing
 221 fluoroscopy use and granted by another state **or organization** shall be
 222 submitted to the Department for review and evaluation on an individual
 223 case-by-case basis.
- 224 (h) **Department registered fluoroscopy operators shall operate**
 225 **machines within their respective scope of practice, training, and**
 226 **experience.**
- 227 2.4.6 General Requirements Applicable to Issuance and Maintenance of Department Registrations.
- 228 2.4.6.1 The application to be registered in the State of Colorado shall be submitted on the
 229 appropriate Department form(s) and shall contain all information required by the
 230 Department as indicated on the form(s) and all accompanying instructions.
- 231 2.4.6.2 Upon a determination that an applicant meets the requirements of the regulations, the
 232 Department shall issue a Notice of Registration.
- 233 2.4.6.3 The Department may incorporate in the Notice of Registration at the time of issuance, or
 234 thereafter by appropriate rule, regulation, or order, such additional requirements and
 235 conditions with respect to the registrant's activities as the Department deems appropriate
 236 or necessary.
- 237 2.4.6.4 Approval to conduct or perform activities in accordance with the registration requirements
 238 of these regulations shall be:
- 239 (1) For a period of two (2) years, except as otherwise specified by these regulations
 240 or the Department; and

Commented [JSJ17]:

The language of this provision is revised to reflect the revised scope of Appendix 2O.

Commented [JSJ18]:

Revised for clarity.

Commented [JSJ19]: The addition of "or organization" will allow review of unforeseen registrations or licensing on a case by case basis. One example may be a fluoroscopy operator license or registration from another country.

Commented [JSJ20]:

Department registered fluoroscopy operators may have varying levels of independence and/or supervision when operating fluoroscopy machines. This provision is added to clarify that such operation is to be within the individuals scope of practice, level of training and experience.

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- 241 (2) Limited to the category or categories of activities specifically designated in the
 242 Notice of Registration.
- 243 2.4.6.5 The registrant shall notify the Department in writing within thirty (30) calendar days of
 244 making any change of information contained in the application for registration and/or the
 245 Notice of Registration.
- 246 2.4.6.6 Except as provided by 2.4.6.7, each Notice of Registration shall expire at the end of the
 247 month in the year stated therein.
- 248 2.4.6.7 In any case in which a registrant, not less than thirty (30) calendar days prior to the
 249 expiration of the registrant's authorization, has filed an application in proper form for
 250 renewal or for a new registration authorizing the same activities, such existing
 251 authorization shall not expire until final action by the Department.
- 252 2.4.6.8 The Department will not review or otherwise process a new application or application for
 253 renewal for which no fee is received.
- 254 (1) All application fees are non-refundable.
- 255 2.4.6.9 The Department may deny, withdraw, limit or qualify its approval of any person to perform
 256 activities upon determining that such action is necessary in order to prevent undue
 257 hazard to health and safety, or for other reasonable cause.
 258

* * *

CERTIFICATION EVALUATION

2.5 Certification Evaluations.

2.5.1 Frequency of Certification Evaluations.

- 263 2.5.1.1 Each radiation machine registrant shall have its radiation machine(s) and facility
 264 evaluated by a Department-approved qualified inspector annually, except as provided in
 265 2.5.1.2 through 2.5.1.5.
- 266 (1) Each certification evaluation shall determine if the machine is safe for each
 267 intended use and is in compliance with the specifications of the equipment
 268 manufacturer and these regulations.
- 269 (2) Each certification evaluation subsequent to the initial certification evaluation shall
 270 be completed in or prior to the same calendar month as the previous certification
 271 evaluation.
- 272 (3) The calendar month of a certification evaluation of a machine in any month prior
 273 to the month in which it is due shall become the calendar month in which the
 274 subsequent certification is due.
- 275 (4) A certification evaluation conducted after the month in which it was due shall not
 276 change the month in which subsequent certification evaluations are due.

277 **2.5.1.2** Each non-healing-arts x-ray imaging machine or system regulated by Parts 5, 8 or 9 shall
 278 be inspected at least every two (2) years. These include, but are not limited to, x-ray
 279 machines used for industrial radiography, nondestructive analysis, forensics or non-

Commented [JSJ21]:
 Additional machine types are added as examples for clarity and understanding of the rule. This does not change the current inspection frequency of these devices which already fall within a 2 year inspection cycle.

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human security screening, foodstuff, packaging or equipment inspections or measurements.

2.5.1.3 Each bone densitometry, dental, podiatry or veterinary radiation machine shall be inspected at least every three (3) years, except that:

- (1) Each radiographic x-ray machine used in non-intraoral dentistry or podiatry that is capable of continuously variable kilovoltage peak (kVp) or continuously variable milliamperage (mA) or continuously variable collimation shall be inspected annually.
- (2) Each machine used in podiatry that is capable of operating at more than 30 mA shall be inspected annually.
- (3) Each volumetric dental imaging system or computed tomographic system for human use shall be inspected annually.
- (4) Each portable hand-held instrument used for any purpose on living humans shall be inspected annually.

TABLE 2-1: SUMMARY OF FREQUENCY OF RADIATION MACHINE ~~INSPECTION~~**CERTIFICATION EVALUATIONS**

Category	Frequency of certification evaluation
Excluding systems used in veterinary medicine, and unless otherwise specified in this Table 2-1, each: <ul style="list-style-type: none"> General use x-ray system; CT (Computed Tomography) system; Fluoroscopy system; Dental Cone Beam Computed Tomography (CBCT) system; Volumetric dental imaging system; Hand-held x-ray imaging systems for human use; Podiatry system used at more than 30 mA; Non-intraoral dentistry or podiatry x-ray system capable of continuously variable kilovoltage peak (kVp) or continuously variable milliamperage (mA) or continuously variable collimation; Therapy systems for human or veterinary use; Security scanner x-ray systems used on living humans; All systems identified above entering the state under reciprocity for more than 180 days. 	Every one (1) year

Commented [JSJ22]: This provision is not new – it is relocated from the bottom of the table.

Commented [JSJ23]:
 This provision is relocated from the lower part of Table 2-1 to group all systems with an annual (1 year) frequency together in the table.

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Category	Frequency of certification evaluation
Each industrial (non-healing-arts) x-ray imaging machine or system regulated under Parts 5, 8 or 9 including: <ul style="list-style-type: none"> Security scanners for non-living human use; X-ray fluorescence (XRF) systems; Industrial radiography/Non-destructive testing; Forensics; Tissue specimen imaging systems-; Scanning systems for food production or packaging inspection. Therapy systems for non-healing arts use. 	Every two (2) years
Except as otherwise specified in this Table 2-1, each: <ul style="list-style-type: none"> Bone densitometry (DXA) system; Dental system; Podiatry system used at less than or equal to 30 mA; Veterinary system, including hand-held units. 	Every three (3) years
Each radiographic x-ray machine used in: <ul style="list-style-type: none"> Non-intraoral dentistry or podiatry x-ray systems capable of continuously variable kilovoltage peak (kVp) or continuously variable milliamperage (mA) or continuously variable collimation. 	Every one (1) year
Pursuant to 2.5.1.3(2), each x-ray machine used in podiatry at more than 30 mA	Every one (1) year

Commented [JSJ24]: This provision is retained and relocated above with other machines on a 1 year certification evaluation (inspection) frequency.

Commented [JSJ25]: This requirement has been relocated to the top section of Table 2-1 for consistency with other machines/uses that require annual inspection.
There is no change to the inspection frequency.

Commented [JSJ26]:
This provision is amended with the intent to use consistent language and to clarify the requirements involving initial and recurring machine certification evaluations (inspections).

The proposed changes are intended to clarify existing requirements relating to initial and routine certification evaluations for all types of radiation producing machines.

Commented [JSJ27]:
The language of this provision is intended to address the initial installation of a brand new machine, a used machine that was acquired but is new to the facility, or an existing machine that has been relocated within an existing facility.

~~2.5.1.4 Except as otherwise specified in regulation, each radiation machine system shall be evaluated within ninety (90) calendar days of installation or service that could potentially affect radiation output or technique settings. Such service includes, but is not limited to, the repair or replacement of high voltage generators, tube heads, consoles or image receptor systems. Except as otherwise specified in regulation, each radiation machine shall have a certification evaluation performed within ninety (90) calendar days of:~~

~~(1) The initial installation of a new radiation machine, a radiation machine that is new to the facility, or a radiation machine that is relocated to a new area or room of an existing facility; or~~

~~(2) Any service after initial installation that could potentially affect radiation output (dose indices) or technique settings, including but not limited to the repair or replacement of high voltage generators, tube heads, consoles or image receptor systems.~~

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(3) Receipt of a new radiation machine that does not require a physical installation, including hand-held x-ray systems, or portable or fixed x-ray systems that are battery operated or that plug into an electrical outlet.

Commented [JSJ28]:

This is a new provision that is intended to clarify the certification evaluation requirements for x-ray machines that do not require a "traditional" installation, such as machines that are self-contained and operate via battery power or may become operable by simply plugging them into an electrical outlet.

2.5.1.5 Each new installation of a mammography system shall be evaluated by a registered medical physicist authorized in mammography prior to being used to perform any human examination. The following radiation machines shall have a certification evaluation performed within ninety (90) calendar days of installation and prior to being used to perform any examination on living humans:

Commented [JSJ29]:

Similar to the changes proposed for 2.5.1.4, this provision is revised to clarify that for installations of a new system, that a certification evaluation must be completed prior to use on humans and within 90 days of installation. This is a revision of the language in the current 2.5.1.6.

(1) Each initial (new) installation of a mammography imaging system. The evaluation must be performed by a registered medical physicist authorized in mammography;

(2) Each initial (new) installation of a Computed Tomography (CT) system, excluding volumetric dental imaging systems, dental CBCT systems, and digital breast tomosynthesis systems. The evaluation must be performed by or under the personal supervision of a registered medical physicist authorized in CT.

2.5.1.6 Excluding volumetric dental imaging systems, dental CBCT, and digital breast tomosynthesis systems, each new installation of a CT system shall be evaluated by a registered medical physicist authorized in CT prior to being used to perform any human examination.

Commented [JSJ30]:

The requirements of this provision are incorporated in the revised provision 2.5.1.5 (above).

2.5.1.7 Any radiation machine and/or facility not inspected in accordance with 2.5.1.1 through 2.5.1.6, or otherwise determined to be out of compliance with these regulations, shall be subject to a Department enforcement inspection and subject to the fees specified in Part 12.

Commented [JSJ31]:

Due to the elimination/incorporation of prior 2.5.1.6, this provision is renumbered.

2.5.2 Procedures for Certification Evaluations by Qualified Inspectors.

2.5.2.1 Each qualified inspector who performs a certification evaluation of a radiation machine and facility evaluation shall use procedures that are sufficient to determine compliance with these regulations.

2.5.2.2 If a radiation machine fails to meet any requirement specified by these regulations, including manufacturer's required specifications, the qualified inspector shall immediately so inform the registrant and RSO, notify the owner (registrant) or operator immediately and shall notify the department within three days after the determination.

Commented [JSJ32]:

Clarifying language is revised and added to ensure that notification to the department is made in a timely manner, consistent with state statute (law) in [25-11-104\(8\)\(a\), CRS](#).

2.5.2.3 If the radiation machine is determined to be unsafe (as provided in Part 6 and described in Appendix 6D), the qualified inspector shall affix to such radiation machine system, in a location clearly visible to the operator and patient, if applicable, an "Unsafe for Use" label authorized and issued by the Department, indicating, as applicable, that such machine is not authorized for human, animal or other use.

2.5.2.4 Reporting and Labeling Procedures.

(1) Each qualified inspector shall provide an accurate and complete Certification Evaluation Report to the registrant and to the Department on Form R 59-1, "X ray

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- 353 Machine Certification Evaluation Report," in accordance with the instructions
 354 contained in that form.
- 355 (a) A clear and legible report may be substituted for Form R 59-1, provided
 356 that it is in the same format and provides all of the information required
 357 by Form R 59-1.
- 358 (b) Violations of the regulations not related to the performance of the specific
 359 radiation machine(s) shall be reported to the registrant and Department
 360 using Form R 59-2, "X-ray Facility Compliance Evaluation Report," in
 361 accordance with the instructions contained in that form.
- 362 (c) Report(s) required by 2.5.2.4(1) shall indicate full or partial compliance
 363 and any specific violation of these regulations.
- 364 (d) Report(s) required by 2.5.2.4(1) shall include recommendations for
 365 corrective actions by the registrant (if applicable) to assist in achieving
 366 full compliance or improving radiation safety and the quality of the
 367 imaging process.
- 368 (e) The Department shall be notified within three (3) business days of
 369 radiation machine violations. Report(s) required by 2.5.2.4(1) that does
 370 not indicate violations shall be received by the Department no later than
 371 fifteen (15) calendar days after the inspection date, unless otherwise
 372 authorized by the Department.
- 373 (2) A certification label issued by the Department shall be affixed in a location clearly
 374 visible to the machine operator and patient, if applicable, when it is determined
 375 that the machine requirements of these regulations are fully met.
- 376 (a) For a machine that was found to be in full compliance, the certification
 377 label shall be affixed no later than fifteen (15) calendar days (unless
 378 otherwise authorized by the Department) after the inspection date.
- 379 (b) For a noncompliant machine, the certification label shall be affixed no
 380 later than fifteen (15) calendar days (unless otherwise authorized by the
 381 Department) after the date that full compliance was achieved.
- 382 (3) Each qualified inspector shall ensure that the following documentation is
 383 provided to the Department to confirm that each violation was corrected as
 384 required by 2.6.3.1 and/or 2.6.4.1 within thirty (30) calendar days of the date of
 385 inspection.
- 386 (a) For a noncompliant machine for which full compliance has been
 387 achieved, the completed documentation (on Form R 59-1 or equivalent)
 388 shall be received by the Department no later than fifteen (15) calendar
 389 days after the date that compliance was achieved.
- 390 (b) For a noncompliant facility, the completed documentation (on Form R 59-
 391 2 or equivalent) shall be received by the Department no later than fifteen
 392 (15) calendar days after the date that full compliance was achieved.
- 393 (4) Concealing, defacing or altering of Department-issued certification labels is
 394 prohibited.

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- 395 (5) Repeated failure by a qualified inspector, to affix certification labels or to
 396 complete certification evaluation reports in a timely manner as provided in 2.5.2.4
 397 shall be subject to review and audit as provided in 2.9 and also subject to the non
 398 routine inspection fee as provided in Part 12.
- 399 **2.6 Facility Registrant Responsibilities.**
- 400 2.6.1 The registrant shall allow only individuals who are adequately trained in radiation safety to
 401 operate the machine and perform a radiographic examination. Training shall include instruction
 402 on the specific x-ray system to be used and review of the applicable and critical requirements of
 403 the operator manual.
- 404 2.6.1.1 The facility registrant shall evaluate and document the qualifications of each individual
 405 permitted to operate any radiation machine at the facility.
- 406 (1) Each operator shall meet all radiation safety training and experience
 407 requirements of the respective State of Colorado professional licensure board, as
 408 applicable, and any applicable requirements of this Part 2.
- 409 (2) The registrant shall maintain a list of all operators of any radiation machine used
 410 by the facility registrant.
- 411 (a) For fluoroscopy equipment used in examination of a living human, a list
 412 of operators and individuals providing supervision of operators shall be
 413 maintained.
- 414 (b) The list of all operators and supervisors shall be updated at least
 415 annually as part of the radiation safety program required by Part 4,
 416 Section 4.5.
- 417 (3) Records of evaluations shall:
- 418 (a) Include current certifications and qualifications;
- 419 (b) Be updated annually by the facility; and
- 420 (c) Be produced for examination upon request during any inspection
 421 conducted under the requirements of these regulations.
- 422 2.6.1.2 A physician, chiropractor, dentist, podiatrist, or veterinarian who meets the applicable
 423 requirements of Part 6, Section 6.3.1.6(1) and these regulations, is considered to have
 424 demonstrated adequate training in radiation safety and the safe and effective use of the
 425 radiation machine (consistent with 2.6.1.5) and may operate radiation machines as part
 426 of a medical, chiropractic, dental, podiatric or veterinary practice, respectively.
- 427 2.6.1.3 For a radiologist assistant "adequately trained" shall mean that the individual is qualified
 428 as provided in Appendix 2G.
- 429 2.6.1.4 For any radiographic x-ray system used on a living human (consistent with 2.6.1.2,
 430 2.6.1.3 and 2.6.1.5 through 2.6.1.14), "adequately trained" shall mean that the individual
 431 meets the requirements of Appendix 2D.
- 432 (1) Limited-scope x-ray machine operator approval is limited to imaging procedures
 433 for x-ray examination of the skull, chest, hip/pelvis and spine/sacrum, upper
 434 extremities and lower extremities, **and abdomen**.

Commented [JSJ33]:

Images of the abdomen are added as permitted examinations that an LSO can perform. This is an imaging procedure commonly performed at facilities by LSOs. The approach is similar to imaging of the lower spine and coccyx, but with a wider field of view.

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- 435 (2) A limited-scope x-ray machine operator shall not perform radiologic procedures
 436 involving the administration or utilization of contrast media, bone densitometry,
 437 fluoroscopic, mammography, computed tomography, or radiation therapy
 438 procedures.
- 439 2.6.1.5 For fluoroscopy equipment used in examination of a living human, "adequately trained"
 440 shall mean that, in addition to meeting all applicable requirements in 2.4.5.5, 2.6.1.1
 441 through 2.6.1.4, and Appendix 2O:
- 442 (1) Each individual who either supervises a fluoroscopy procedure or operates a
 443 fluoroscopy imaging system shall have adequate training in its safe operation.
 444 This training shall be documented and include the following:
- 445 (a) Basic properties of radiation;
- 446 (b) Biological effects of x-ray;
- 447 (c) Principles and safe operation of the specific fluoroscopic x-ray system(s)
 448 to be used;
- 449 (d) Dose management including dose reduction techniques, monitoring, and
 450 recording;
- 451 (e) Applicable requirements of these regulations.
- 452 After January 1, 2022, the training required by 2.6.1.5 shall also include:
- 453 (f) Radiation protection methods for patients and staff;
- 454 (g) Units of measurement and dose, including DAP (dose-area product)
 455 values and air kerma;
- 456 (h) Factors affecting fluoroscopic outputs;
- 457 (i) High level control options; and
- 458 (j) Fluoroscopic and fluorographic (radiation) outputs of each mode of
 459 operation on the system(s) to be used clinically.
- 460 **2.6.1.6** For mammography equipment used in radiography of the human breast, "adequately
 461 trained" shall mean that the individual operator meets the requirements of **Appendix**
 462 **2M2.4.5.4(1) and 2.4.5.4(2).**
- 463 **(1) Registered provisional mammographers may operate machines and**
 464 **perform radiographic examinations under supervision while in-training**
 465 **as specified in Appendix 2M.**
- 466 2.6.1.7 For any computed tomography (CT) system used on a living human (excluding
 467 Volumetric Dental Imaging Systems, CBCT systems, and systems used for digital breast
 468 tomosynthesis) "adequately trained" shall mean that the individual operator meets the
 469 requirements of Appendix 2E.
- 470 2.6.1.8 For any bone densitometry equipment used in examination of a living human,
 471 "adequately trained" shall mean that the individual operator meets the requirements of
 472 Appendix 2F.

Commented [JSJ34]:

This provision is revised to reference section 2.4.5.4 rather than Appendix 2M, consistent with changes to these other sections. Appendix 2M will be used specifically and exclusively for provisional mammographers.

Individuals meeting 2.4.5.4(1) and (2) are considered to be qualified mammographers as defined in section 2.2. Provision (1) is added to clarify that registered provisional mammographers may perform examinations while in-training and under the applicable level of supervision, but they are not considered "qualified mammographers" until the requirements of 2.4.5.4(1) and 2.4.5.4(2) have been met.

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- 473 2.6.1.9 For radiographic equipment used in the practice of medicine, "adequately trained" shall
 474 mean that the individual operator meets all applicable requirements of the Colorado
 475 medical board.
- 476 **2.6.1.10** For radiographic equipment used in chiropractic, "adequately trained" shall mean
 477 that the individual operator meets all applicable requirements of the Colorado Board of
 478 Chiropractic Examiners and Rule 19 of 3 CCR 707-1.-
- 479 2.6.1.11 For radiographic equipment used in dentistry, including Volumetric Dental
 480 Imaging Systems, "adequately trained" shall mean that the individual operator meets all
 481 applicable requirements of the Colorado Dental Board and Rule X of 3 CCR 709-1.
- 482 **2.6.1.12** For radiographic equipment used in podiatry, "adequately trained" shall mean
 483 that the individual operator meets all applicable requirements of the Colorado Podiatry
 484 Board and ~~Rule 700 of 3 CCR 712-93~~ **CCR 712-1**.
- 485 2.6.1.13 For radiographic equipment used in veterinary medicine, "adequately trained"
 486 shall mean that the individual operator meets all applicable requirements of the Colorado
 487 Board of Veterinary Medicine and 4 CCR 727-1.
- 488 2.6.1.14 An individual, enrolled in an ARRT-recognized program or graduated from such a
 489 program, may operate radiation machines so long as the individual works under the direct
 490 supervision of a radiologic technologist or other qualified trainer and has documentation
 491 of having completed education and experience equal to that specified in the program.
- 492 (1) A graduate from an ARRT-recognized program is granted ninety (90) calendar
 493 days from the date of graduation to schedule, take and pass the ARRT radiologic
 494 technology registry examination.
- 495 (2) During the 90-day period allowed by 2.6.1.14(1), the graduate is considered to
 496 satisfy Appendix 2D requirements.
- 497 (3) A student or graduate who fails to pass the registry examination has not met the
 498 requirements of Appendix 2D and shall not operate any radiation machine
 499 system on a living human unless otherwise authorized by the Department.
 500

* * *

RECIPROCITY

2.8 Out-of-State Radiation Machines.

- 504 2.8.1 Subject to these regulations, any person who desires to bring radiation machines into this state
 505 for temporary use is hereby granted authorization to conduct activities using these machines for a
 506 period not to exceed a total of 180 days in any calendar year, provided that:
- 507 2.8.1.1 The out-of-state registration, and/or other documents authorizing the use of radiation
 508 machines issued by the agency having jurisdiction where the out-of-state registrant
 509 maintains an office for directing the registered activity and at which radiation safety
 510 records are normally maintained, does not limit the activity authorized by such document
 511 to specified installations or locations; and
- 512 2.8.1.2 The person proposing to bring such machines into Colorado shall give written notice to
 513 the Department at least fifteen (15) calendar days before such machine is to be used in

Commented [JSJ35]:
 Error correction – removal of unneeded period.

Commented [JSJ36]:
 Update the cross-reference due to recodification of
 Podiatry rules.

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- 514 the state, unless otherwise authorized by the Department as provided in 2.8.2. The notice
 515 shall be made using the Department's "X-ray Reciprocity Request" Form R-200 and shall
 516 include all information required by that form.
- 517 (1) As part of this notice, the person requesting reciprocity shall certify that:
- 518 (a) A copy of all applicable parts of these regulations shall be available at
 519 each use location in State of Colorado;
- 520 (b) Each machine has been evaluated and determined to be in compliance
 521 with these, or equivalent, regulations; and
- 522 (c) The operation of each radiation machine shall be in accordance with the
 523 applicable requirements of these regulations.
- 524 (2) In the case of a request to perform a healing arts screening program within the
 525 State, submit a completed Form R-300, "Application for Registration – Healing
 526 Arts Screening," with the reciprocity request, including all of the information
 527 required, pursuant to Part 6, Appendix 6F, by the form and any accompanying
 528 instructions.
- 529 (3) In the case of a request to perform mammography screening within the State, a
 530 copy of the facility's mammography certificate issued by the FDA (21 CFR **Part**
 531 900.11(a)) and applicable American College of Radiology credentials shall be
 532 included with the reciprocity request.
- 533 (4) The person requesting reciprocity shall also supply such other information as the
 534 Department may request.
- 535 2.8.1.3 The out-of-state registrant complies with all applicable regulations of the Department; and
- 536 2.8.1.4 The out-of-state registrant shall at all times during work at any work location within the
 537 State have available the pertinent documentation as required by these regulations,
 538 including:
- 539 (1) Pertinent registration documentation;
- 540 (2) Written authorization from the Department for in-state activities;
- 541 (3) Applicable sections of these regulations as certified pursuant to 2.8.1.2(1)(a);
- 542 (4) Documentation that each radiation machine has been evaluated in accordance
 543 with these regulations, or other state regulations which are equivalent; and that
- 544 (a) The machines comply with the manufacturer's required specifications;
- 545 (b) The evaluations are current, having been performed within one year prior
 546 to entry into the State as required in 2.5; and
- 547 (5) In the case of mammography-related functions, a copy of the mammography
 548 certificate issued by the FDA, applicable American College of Radiology
 549 credentials, quality control records, personnel records, and the most recent
 550 medical physicist survey.

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- 551 2.8.2 Based upon an application that includes documentation of why it is not possible or is an undue
552 hardship to provide fifteen (15) calendar days notice, the Department may:
- 553 2.8.2.1 Grant permission to proceed sooner; or
- 554 2.8.2.2 Waive the requirement for filing additional written notifications during the remainder of the
555 calendar year following the receipt of the initial notification from a person engaging in
556 activities pursuant to 2.8.1.
- 557 2.8.3 While in the State of Colorado, all radiation machines are subject to inspection and may ~~be~~
558 ~~required to be inspected and/or certified~~ **require a certification evaluation** by a qualified
559 inspector who is registered with the Department.
- 560 2.8.4 The out-of-state registrant shall notify the Department within one hour after arrival at the actual
561 work location within the State and shall notify the Department within one hour after any change of
562 work location within the State.
- 563 2.8.5 If multiple individuals work concurrently at more than one work location under an approval
564 granted pursuant to 2.8.1, each day worked per location shall be counted separately toward the
565 limit of 180 cumulative total days per calendar year.
- 566 2.8.6 The Department may revoke, limit, or qualify its approval for the use of radiation machines in the
567 State upon determining that the approval was based on false or misleading information submitted
568 to the Department or that such action is necessary in order to prevent undue hazard to public
569 health and safety or property.
- 570 2.8.7 Each person operating a radiation machine within the State under reciprocity in areas of exclusive
571 federal jurisdiction shall comply with the applicable federal requirements.
- 572 * * *
573

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PART 2, APPENDIX 2D: X-RAY SYSTEM OPERATOR ADEQUATE RADIATION SAFETY TRAINING AND EXPERIENCE, INCLUDING LIMITED SCOPE X RAY MACHINE OPERATOR (LSO)

Each operator of a radiation machine used for healing arts purposes on living humans other than in dentistry, chiropractic or podiatry, shall meet the following education and experience requirements:

2D.1 Is certified or registered by:

2D.1.1 The American Registry of Radiologic Technologists as a Radiologic Technologist; or

2D.1.2 A specialty board determined by the department to have substantially equivalent requirements for certification as the American Registry of Radiologic Technologists,

Or

2D.2 Is certified by the Department as a State of Colorado-registered limited scope operator, to conduct only those radiographic examinations specified in Section 2.6.1.4 and having satisfactorily completed:

2D.2.1 At least 80 hours of didactic training providing the minimum hours of instruction in the specific subjects listed in 2D.2.1.1 through 2D.2.1.6:

2D.2.1.1 Basic X-Ray Physics—20 hours

(1) Structure of matter and the atom

(2) General description of production of x-rays

(3) X-ray emission, quantity and quality

(4) Function of filtration and effects it has on x-ray beam collimation

(5) Types of function of beam limiting devices

(6) Design, features and functions of x-ray tubes

(7) Circuitry of the x-ray machine

2D.2.1.2 Radiobiology—3 hours

(1) Effects of ionizing radiation on the human body

(2) Molecular and cellular radiobiology

(3) Factors that cause somatic and genetic damage

2D.2.1.3 Radiation Protection—6 hours

(1) ALARA

(2) Shielding materials

(3) Radiation quantity and units of measurement

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604	(4)	Basic interactions of x-rays with matter
605	(5)	Primary and secondary scatter
606	(6)	Importance of time, distance, shielding
607	(7)	Maximum permissible doses: occupational and public
608	(8)	Patient protection
609	2D.2.1.4.	Principles of Exposure—15 hours
610	(1)	Factors that control and influence radiographic quality
611	(2)	Properties of x-rays
612	(3)	Size distortion
613	(4)	Shape distortion
614	(5)	kVp, mAs, time
615	(6)	AEC and manual
616	(7)	Grids
617	(8)	Collimation
618	(9)	Intensifying screens
619	(10)	X-ray films and holders
620	(11)	Artifacts
621	(12)	Inverse square law
622	2D.2.1.5	Procedures and Processing—4 hours
623	(1)	Film storage and handling
624	(2)	Manual, automatic processing film processing and troubleshooting
625	(3)	Computed Radiography (CR)
626	(4)	Digital Radiography (DR)
627	(5)	PACs
628	(6)	Quality assurance / quality control
629	2D.2.1.6	Anatomy and Positioning—32 hours
630	(1)	Chest—4 hours
631	(2)	Extremity—12 hours

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632	(3)	Spine—8 hours
633	(4)	Skull—8 hours;
634	and	
635	2D.2.2	At least 480 hours of clinical training during which time the individual may perform x-ray
636		examinations only under personal direct supervision of a qualified trainer, including:
637	2D.2.2.1	At least 320 hours experiential training at a clinic; and
638	2D.2.2.2	No more than 160 hours of laboratory training (exclusive of the didactic
639		hours required by 2D.2.1.1 through 2D.2.1.6);
640	and	
641	2D.2.3	Performance of the following imaging procedures (at least 808 4 examinations in total,
642		with record of each examination kept on file):
643	2D.2.3.1	Ribs—4 examinations;
644	2D.2.3.2	Hand—4 examinations;
645	2D.2.3.3	Wrist—4 examinations;
646	2D.2.3.4	Forearm—4 examinations;
647	2D.2.3.5	Elbow—4 examinations;
648	2D.2.3.6	Humerus—4 examinations;
649	2D.2.3.7	Shoulder—4 examinations;
650	2D.2.3.8	Clavicle—4 examinations;
651	2D.2.3.9	Femur—4 examinations;
652	2D.2.3.10	Tibia – Fibula—4 examinations;
653	2D.2.3.11	Ankle—4 examinations;
654	2D.2.3.12	Foot—4 examinations;
655	2D.2.3.13	Sinuses—4 examinations;
656	2D.2.3.14	Skull—4 examinations;
657	2D.2.3.15	Facial Bones—4 examinations;
658	2D.2.3.16	C-Spine—4 examinations;
659	2D.2.3.17	Thoracic Spine—4 examinations;
660	2D.2.3.18	Lumbar Spine—4 examinations;

Commented [JSJ37]:

The proposed change clarifies that supervision must be direct rather than personal during the clinical training period, consistent with the language of 2.6.1.14.

"Direct supervision" means that the supervisor must be available in the facility to assist the individual being supervised, while "personal supervision" means the supervisor is in the same room as the supervised individual. Both "direct" and "personal" supervision are defined in [Part 1 of the radiation regulations](#).

Commented [JSJ38]:

The total number of exams is updated to reflect the added abdominal exams. Training on abdomen exams is typically included in the curriculum of LSO training programs.

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661 Chest—4 examinations;
662 2D.2.3.20 Hip / Pelvis—4 examinations;
663 **2D.2.3.21 Abdomen—4 examinations.**

664 and

665 2D.2.4 A passing score on the American Registry of Radiologic Technologists (ARRT)
666 examination for the Limited Scope of Practice in Radiography. A passing score is:

667 2D.2.4.1 A score of at least 75% correct on the Core Module, and

668 2D.2.4.2 An average score of at least 75% correct on the Radiographic
669 Procedures Modules for Chest, Extremities, Skull/Sinuses, and Spine.
670

671 2D.2.5 And, has maintained a minimum of twenty-four (24) hours of continuing education every
672 two years in the areas of radiology, radiation safety, radiography and similar fields. This
673 education shall:

674 2D.2.5.1 Conform to guidelines equivalent to the most current revision of the
675 *ARRT Continuing Education Requirements for Renewal of Registration*;

676
677

* * *

Commented [JSJ39]:
Consistent with the changes in 2.6.1.4(1), abdomen exams are incorporated here.

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PART 2, APPENDIX 2F: BONE DENSITOMETRY (BD) ADEQUATE RADIATION SAFETY TRAINING AND EXPERIENCE

Each operator of a dual-energy x-ray absorptiometry system used on a living human shall meet the following education and experience requirements:

2F.1 Is certified or registered:

2F.1.1 As R.T.(R), R.T.(M), R.T.(N), R.T.(T), or CNMT; or

2F.1.2 By The International Society for Clinical Densitometry (ISCD), combined with or including the didactic radiation safety training in 2F.2.1.1, 2F.2.1.2 and 2F.2.1.3; or

2F.1.3 By A specialty board determined by the department to have substantially equivalent requirements for certification;

Or

2F.2 Is accepted by the Department as having satisfactorily completed:

2F.2.1 At least 30 hours of didactic training recognized by the Department that provided the minimum hours of instruction (as part of, or in addition to, specialty certificate and equipment operation training) in the specific subjects listed in 2F.2.1.1 through 2F.2.1.9:

* * *

and

2F.2.2 At least 480 hours of clinical training during which time DXA examinations are performed only under direct supervision of a Colorado qualified bone densitometry equipment operator or other qualified trainer:

2F.2.3 Performance of the following imaging procedures (at least 30 examinations in total, with record of each examination kept on file):

2F.2.3.1 DXA scanning of the forearm—10 examinations;

2F.2.3.2 DXA scanning of the lumbar spine—10 examinations;

2F.2.3.3 DXA scanning of the proximal femur—10 examinations;

and

2F.2.4 A passing score on the American Registry of Radiologic Technologists (ARRT) Bone Densitometry Equipment Operator Examination. ~~A passing score is a score of at least 75% correct.~~

and

2F.2.5 Has maintained a minimum of eighteen (18) hours continuing education every three years, documented by certificate(s) or other attestation(s) of satisfactory completion.

Commented [JSJ40]:

For Bone Densitometry Operators, the acceptable score is not determined by the department, but rather, is determined by the testing organization (ARRT). The ARRT provides the applicant with the score and notes whether it is passing or not passing. Due to changes in the ARRT test scoring process from a "percentage" value to a "scaled" value score, the reference to 75% is removed from the rule.

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712 **PART 2, APPENDIX 2G: RADIOLOGIST ASSISTANT (RA) ADEQUATE RADIATION SAFETY**
713 **TRAINING AND EXPERIENCE**

714 Any person who acts as a Radiologist Assistant or Radiologist Practitioner Assistant shall be an individual
715 who is 18 years of age and has provided written documentation as evidence of:

716 2G.1 Current certification as both R.T.(R) and a

717 2G.1.1 Registered Radiologist Assistant (R.R.A.(**ARRT**)); or

718 2G.1.2 Radiology Practitioner Assistant (RPA) prior to January 1, 2008;

719 And

720 2G.2 Having:

721 2G.2.1 Met the specific qualifications in education recognized by the ARRT, ASRT, ACR, or
722 equivalent nationally recognized entity; and

723 2G.2.2 Been trained and worked under the direction of a radiologist.

724 * * *

725

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**~~PART 2, APPENDIX 2M: QUALIFIED MAMMOGRAPHER ADEQUATE RADIATION SAFETY
 TRAINING AND EXPERIENCE~~**

~~Any individual who performs mammography shall meet the following educational and experience requirements:~~

~~2M.1— Is certified by the American Registry of Radiologic Technologists in Mammography and meets the following initial requirements;~~

~~2M.1.1 Forty (40) hours or more documented training including breast anatomy and physiology, positioning and compression, quality assurance/quality control techniques, and imaging of patients with breast implants; and~~

~~2M.1.2 Eight (8) hours or more documented training in each mammography modality to be used by the technologist in performing mammography examinations; and~~

~~2M.1.3 Performance of at least 25 mammograms under the direct supervision of a qualified mammographer.~~

~~2M.2— Or, is a provisional mammographer working under the direct supervision of a qualified mammographer, who:~~

~~2M.2.1 Is enrolled in or has completed a structured and documented training program that meets the requirements of 2M.1.1 and 2M.1.2; and~~

~~2M.2.2 Has been approved as a Provisional Mammographer prior to performing mammograms to meet the requirements of 2M.1.3.~~

~~2M.3— Continuing education and continuing experience:~~

~~2M.3.1 Continuing education:~~

~~2M.3.1.1— A mammographer shall complete fifteen (15) hours of continuing education within the immediate prior 36 months.~~

~~(1) — A mammographer who fails to meet the continuing education requirement of 2M.3.1.1 shall obtain a sufficient number of continuing education units in mammography to bring their total up to at least fifteen (15) in the previous 36 months.~~

~~(2) — A mammographer who fails to meet the continuing education requirement of 2M.3.1.1 shall work only under direct supervision of a qualified mammographer until the requirement is met.~~

~~2M.3.2 Continuing Experience~~

~~2M.3.2.1— A mammographer shall have performed a minimum of 200 mammography examinations within the immediate prior 24 months.~~

Commented [JSJ41]:

The title and body of Appendix 2M is revised in its entirety for consistency with other proposed changes in Part 2 relating to mammography.

Refer to the proposed changes and side margin comments below for additional information.

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(1) — A mammographer who fails to meet this continuing experience requirement shall perform a minimum of 25 mammography examinations under the direct supervision of a qualified mammographer before resuming the performance of unsupervised mammography examinations.

PART 2, APPENDIX 2M: REQUIREMENTS FOR REGISTRATION AS A PROVISIONAL MAMMOGRAPHER

Any individual who performs mammography and does not meet the requirements of 2.4.5.4(1):

2M.1 Shall have completed or be currently enrolled in a structured and documented training program that requires:

2M.1.1 Forty (40) hours or more of documented training that includes breast anatomy and physiology, positioning and compression, quality assurance/quality control techniques, and imaging of patients with breast implants; and

2M.1.2 Eight (8) hours or more documented training in each mammography modality to be used by the technologist in performing mammography examinations;

And

2M.2 Shall, prior to performing mammograms on living humans, register with the department as a Provisional Mammographer.

2M.2.1 Each applicant for a provisional mammographer registration shall submit the Form R-64 series application and shall include all information required by the department as indicated on the form(s) and all accompanying instructions.

2M.2.2 The provisional mammographer registration is issued for a period of one year and may be renewed one time.

And

2M.3 While in training, shall perform at least 100 mammography examinations on patients under the supervision of a qualified mammographer as follows:

2M.3.1 The initial 25 mammography examinations shall be performed under the personal supervision of a qualified mammographer.

2M.3.2 All remaining mammography examinations after the initial 25 shall be performed under the direct supervision of a qualified mammographer.

2M.3.2 All mammography examinations required by 2M.3.1 and 2M.3.2 shall be documented.

Documentation shall include the name of the supervised individual (individual in-training), the type of exam/modality, the facility name, the examination date, and the name of the supervising qualified mammographer or individual.

* * *

Commented [JSJ42]: Appendix 2M, including the title, is revised and restructured in its entirety for consistency with other proposed changes in Part 2. There is no intent to change the current process for mammography qualifications or for those in-training to become fully qualified mamographer. The proposed changes are to provide clarity and understanding in the rule.

As proposed, Appendix 2M will apply only to those individuals who are in-training to become fully qualified mammographers in Colorado and who cannot currently meet the requirements of 2.4.5.4(1). The provisional mammographer registration is designed to ensure that those in-training have a clear path to becoming fully qualified as mammographers.

The type/level of supervision required for those in training to become a mammographer will vary through the training process. This is clarified in the proposed changes to reflect the current process and expectations where closer supervision is needed during the initial practice examinations being performed versus those completed later in the training process.

Commented [JSJ43]: The requirements of 2M1 are equivalent to those of 2M1 of the current rule.

Commented [JSJ44]: This revised provision restates and clarifies that an individual must register as a Provisional mammographer prior to performing exams on humans, consistent with current practice. The requirements of this section have been relocated from 2.4.5.4(1) of the current rule.

Commented [JSJ45]: The type/level of supervision required for those in training to become a fully qualified mammographer will vary through the training process. This is clarified in the proposed changes to reflect the current process and expectations where closer supervision is needed during the initial practice examinations being performed versus those completed later in the training process.

Commented [JSJ46]: This is a new provision added to ensure that those in-training maintain the necessary documentation to become fully qualified mammographers.

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PART 2, APPENDIX 20: FLUOROSCOPY IMAGING SYSTEM OPERATOR ADEQUATE RADIATION SAFETY TRAINING AND EXPERIENCE

Except for those individuals exempted in 2.4.5.5(1), any person who operates a fluoroscopic machine or a machine capable of fluoroscopic imaging while in fluoroscopic mode for clinical purposes, shall be limited to a licensed Physician Assistant, ~~or licensed~~ Advanced Practice Registered Nurse, ~~or a nationally certified and registered Cardiovascular Lab Specialist and~~ who is at least 18 years of age working within their scope of practice, and:

20.1 Meets the following requirements:

20.1.1 Has completed a course that includes at least forty (40) hours of education on topics that include, but are not limited to, radiation physics, radiation biology, radiation safety and radiation management applicable to fluoroscopy;

And

20.1.2 Has completed forty (40) hours of clinical experience in the use of fluoroscopy for guidance in diagnostic and therapeutic procedures under the personal supervision of a Colorado licensed physician;

And

~~20.1.3 Has received a score of 75% or greater on the ARRT fluoroscopy examination;~~
20.1.3 Meets the requirements of 20.1.3.1 or 20.1.3.2 or 20.1.3.3, as follows:

20.1.3.1 Is a Physician Assistant or Advanced Practice Registered Nurse who has received a passing score on the American Registry of Radiologic Technologists (ARRT) fluoroscopy operators examination.

Or

20.1.3.2 Is registered through Cardiovascular Credentialing International (CCI) as a Registered Cardiovascular Invasive Specialist (RCIS) or a Registered Electrophysiology Specialist (RCES);

Or

20.1.3.3 Is registered with another organization that has been specifically approved in writing by the department.

And

20.1.4 Is registered **with the department** in accordance with Section 2.4.5.5.

And

~~20.2 Maintains their registration by submission of the following with their registration renewal application:~~
Maintains their department fluoroscopy operator registration by submitting the registration renewal application and required fee along with the following:

20.2.1 **Physician Assistants and Advanced Practice Registered Nurses shall submit Aa current active state of Colorado license issued by the Colorado Department of Regulatory Agencies.;** ~~and~~

Commented [JSJ47]:

This provision relating to a passing score is removed from the rule here as the passing score is determined by the testing organization (ARRT). Additionally, ARRT is moving to a scaled score approach for testing rather than a percentage based score, making the % passing score obsolete in the future.

Commented [JSJ48]:

This adds healthcare professionals who currently work in the field of cardiovascular imaging and treatment alongside and under the supervision of physicians. The addition of these allied health professionals will help align the rule with the actual practices being conducted in Colorado cardiac lab facilities.

Commented [JSJ49]:

This provision is intended to allow flexibility in the rule to allow addressing unique qualifications of a given individual on a case-by-case basis.

Commented [JSJ50]:

With the addition of cardiac catheterization lab professionals to the fluoroscopy registration process, this provision is revised to add clarity for the documents that are required to be submitted during the renewal process. This is not a change from the current requirements.

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840 20.2.2 **Nationally certified/registered Cardiovascular Lab Specialists shall submit a copy**
841 **of their active N**~~national certification/-registration.in their respective profession.~~

842 [END OF RULE]

DRAFT 1 11/30/2023

DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Hazardous Materials and Waste Management Division

State Board of Health

RADIATION CONTROL - X-RAY IMAGING IN THE HEALING ARTS

6 CCR 1007-1 Part 06

[Editor's Notes follow the text of the rules at the end of this CCR Document.]

Adopted by the Board of Health August 19, 2020 February 21, 2024, effective date October 15, 2020 April 14, 2024.

PART 6: X-RAY IMAGING IN THE HEALING ARTS

6.1 Purpose and Scope.

6.1.1 Authority.

6.1.1.1 Rules and regulations set forth herein are adopted pursuant to the provisions of sections 25-1-108, 25-1.5-101(1)(l), and 25-11-104, CRS.

6.1.2 Basis and Purpose.

6.1.2.1 A statement of basis and purpose accompanies this part and changes to this part. A copy may be obtained from the Department.

6.1.3 Scope.

6.1.3.1 Part 6 establishes requirements, for which a registrant is responsible, for use of diagnostic and interventional x-ray equipment and imaging systems in the healing arts.

6.1.4 Applicability

6.1.4.1 The provisions of this part are in addition to, and not in substitution for, other applicable provisions in Part 1, 2, 4, 7, 10, 24 and other parts of these regulations.

6.1.4.2 Part 24 also applies to certain healing arts x-ray imaging registrants.

6.1.4.3 The requirements and provisions of this part apply to each registrant or applicant for registration subject to this part unless specifically exempted.

6.1.5 Published Material Incorporated by Reference.

6.1.5.1 Throughout this Part 6, federal regulations, state regulations, and standards or guidelines of outside organizations have been adopted and incorporated by reference. Unless a prior version of the incorporated material is otherwise specifically indicated, the materials incorporated by reference cited herein include only those versions that were in effect as

Commented [JSJ1]:

Editorial note 1: All comments (such as this one) shown in the right side margin of this draft document are for information purposes only to assist the reader in understanding the proposed rule change during the review and comment process.

These side margin notes are **not** part of the rule and all comments will be deleted prior to publication of the final rule by the Colorado Secretary of State.

Editorial note 2: Alignment and formatting corrections and minor typographical adjustments may be made in the rule and may not be specifically identified with a side margin comment.

Editorial note 3: Colorado's radiation regulations must be consistent with the current model rules of the Conference of Radiation Control Program Directors (CRCPD), Inc.

Editorial note 4: This draft is not a complete rule. Unaffected sections or provisions have been removed from the rule and are not shown in this draft. Unaffected sections/provisions are denoted with a " * " and remain as-is in the current rule with no changes. Some provisions may be shown with no changes and are provided for reference purposes.

Commented [JSJ2]:

The stated adoption and effective dates are tentative and subject to change, pending the Board of Health meeting schedule, preliminary acceptance by the Board, final adoption by the Board, and the Colorado Register publication dates.

The anticipated dates are based on the annual rulemaking hearing schedule (regulatory agenda) for the Department which may be found [online](#).

Commented [JSJ3]:

This section updated to reflect expected effective dates of the rule, and revised or more specific web page addresses.

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of the most recent effective date of this Part 6 (~~October, 2020~~**April 2024**), and not later amendments or editions of the incorporated material.

6.1.5.2 Materials incorporated by reference are available for public inspection, and copies (including certified copies) can be obtained at reasonable cost, during normal business hours from the Colorado Department of Public Health and Environment, Hazardous Materials and Waste Management Division, 4300 Cherry Creek Drive South, Denver, Colorado 80246. Additionally, <https://www.colorado.gov/cdphe/radregs><https://cdphe.colorado.gov/hm/radregs> identifies where the incorporated federal and state regulations are available to the public on the internet at no cost. A copy of the materials incorporated in this Part is available for public inspection at the state publications depository and distribution center.

6.1.5.3 Availability from Source Agencies or Organizations.

- (1) All federal agency regulations incorporated by reference herein are available at no cost in the online edition of the Code of Federal Regulations (CFR) hosted by the U.S. Government Printing Office, online at www.govinfo.gov <https://www.govinfo.gov/app/collection/cfr/>.
- (2) All state regulations incorporated by reference herein are available at no cost in the online edition of the Code of Colorado Regulations (CCR) hosted by the Colorado Secretary of State's Office, online at <https://www.sos.state.co.us/CCR/RegisterHome.do> <https://www.sos.state.co.us/CCR/NumericalDeptList.do#1000>.
- (3) Copies of the standards or guidelines of outside organizations are available either at no cost or for purchase from the source organizations listed below.

- a. American Association of Physicists in Medicine (AAPM)
 1631 Prince Street
 Alexandria, VA 22314
 Phone 571-298-1300
aapm.org
- b. National Council on Radiation Protection and Measurements (NCRP)
 7910 Woodmont Avenue, Suite 400
 Bethesda, MD 20814-3095
 Phone: 301-657-2652
ncrponline.org

* * *

[* * * indicates unaffected sections of the rule]

GENERAL REGULATORY PROVISIONS

6.3 General and administrative requirements.

6.3.1 Administrative Controls.

6.3.1.1 Each radiation machine used in the healing arts in the State of Colorado shall be registered with the Department as required by Part 2, Section 2.4 and inspected as prescribed in Part 2, Section 2.5.

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- 77 6.3.1.2 Each radiation machine used on humans shall meet the Federal Performance Standards,
 78 Subchapter J - Radiological Health, 21 CFR 1020.30 through 1020.33.
- 79 (1) Diagnostic X-ray systems and their associated components used on humans and
 80 certified pursuant to the Federal X-Ray Equipment Performance Standard (21
 81 CFR 1020.30 through 1020.33) shall be maintained in compliance with applicable
 82 requirements of that standard.
- 83 (2) Diagnostic x-ray components and systems certified in accordance with 21 CFR
 84 Part 1020 shall not be modified such that the component or system fails to
 85 comply with any applicable requirement of 21 CFR Part 1020 or Part 6.
- 86 (3) The owner of a diagnostic x-ray system who uses the system in a professional or
 87 commercial capacity may have the system modified provided the modification
 88 does not result in the failure of the system or component to comply with the
 89 applicable requirements of Part 6 and any modification is completed by a
 90 registered service company in accordance with 6.3.3.1(5).
- 91 (a) The owner who causes such modification need not submit the reports
 92 required by Part 6, provided the owner records the date and the details
 93 of the modification in the system and maintains this information, and
 94 provided the modification of the x-ray system does not result in a failure
 95 to comply with Part 6.
- 96 (b) Registered service companies shall submit to the Department, records of
 97 modifications of the x-ray system, as required by these regulations.
- 98 (4) Limited exemption from this requirement may be granted by the Department for a
 99 radiation machine manufactured prior to August 4, 1974, provided the registrant
 100 demonstrates that such exemption will not result in undue risk.
- 101 6.3.1.3 The registrant or the registrant's agent shall use approved providers of services,
 102 consistent with Part 2, Section 2.6., including but not limited to operation of equipment,
 103 inspection of radiation machines and facilities, and assembly, installation, service and/or
 104 calibration of radiation machines.
- 105 6.3.1.4 An x-ray imaging system that is found to be non-compliant with the requirements of these
 106 regulations 30 days beyond initial discovery, may continue to be used for up to 90 days
 107 provided:
- 108 (1) The system has not been determined to be unsafe for routine use in accordance
 109 with Appendix 6D;
- 110 (2) Continued use poses no significant radiation risk to patients, members of the
 111 public or employees;
- 112 (3) Does not significantly result in degraded image quality; and
- 113 (4) The registrant obtains in writing, an authorization for continued use from the
 114 Department.
- 115 6.3.1.5 An x-ray imaging system that is determined as provided in Appendix 6D to be unsafe for
 116 human, animal, or other use shall not be operated for diagnostic or therapeutic purposes.
- 117 6.3.1.6 A radiation machine in the healing arts shall be operated:

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- 118 (1) By a physician, chiropractor, dentist, podiatrist or veterinarian who has a current
 119 active State of Colorado license to practice the healing arts and has met the
 120 applicable requirements of Part 2 of the regulations; or
- 121 (2) By an individual authorized by and licensed in accordance with State of Colorado
 122 statutes to engage in the healing arts and has met the applicable requirements of
 123 Part 2 of the regulations; and
- 124 (a) Whose license, licensing body, or licensing regulations and requirements
 125 authorize such operation; and
- 126 (b) Such operation is within the standard and acceptable scope of practice
 127 for the licensed individual; or
- 128 (3) By an individual who is under the general supervision of a licensed individual
 129 authorized in 6.3.1.6(1) or 6.3.1.6(2), where:
- 130 (a) The individual operator being supervised has met the applicable training
 131 requirements of Part 2; and
- 132 (b) Such supervision by a licensed individual is consistent with the
 133 individual's license, licensing body, regulations, and the standard and
 134 acceptable scope of practice for the supervising individual; **or**
- 135 **(4) By an operator who is under the personal supervision of a licensed**
 136 **individual authorized in 6.3.1.6(1), and where:**
- 137 **(a) The operator being supervised has met the applicable training**
 138 **requirements of Part 2, Appendix 20; and**
- 139 **(b) Such operation is within the standard and acceptable scope of**
 140 **practice of the operator being supervised.**
- 141 **6.3.1.7** Exposure under Part 6 of any **living** human being to the useful beam of an x-ray system
 142 shall be solely for healing arts purposes, **or for the purposeful exposure of a living**
 143 **human research subject in accordance with Part 2, section 2.4.1.3,** and only after
 144 such exposure has been authorized by:
- 145 (1) A physician, chiropractor, dentist, or podiatrist who has a current active State of
 146 Colorado license to practice in the healing arts; or
- 147 (2) An individual authorized by and licensed in accordance with State of Colorado
 148 statutes to engage in the healing arts, and:
- 149 (a) Whose license, licensing body, or licensing regulations and requirements
 150 permit authorizing such exposure; and
- 151 (b) Such exposure is within the standard and acceptable scope of practice
 152 for the licensed individual.

* * *

Commented [JSJ4]:

In parallel with the concurrent (2023) proposed changes to Part 2 of the radiation regulations, this new provision is added to tie-in non-physician cardiac catheterization lab professionals as operators of fluoroscopy systems who operate those systems only under personal (in room) supervision of physicians.

Use of fluoroscopy systems by cardiac catheterization lab professionals is routine and common in Colorado. Such use is under the personal (in room) supervision of a physician.

Qualifications for such individuals has been added in Part 2, Appendix 20.

Commented [JSJ5]:

Language is added to address the use of x-ray devices on living humans under Part 6 for research purposes.

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157 6.5.12 Fluoroscopy specific operator qualifications

158 6.5.12.1 Operation of a fluoroscopic x-ray system shall be performed under direct
 159 supervision, **except where otherwise specified in these regulations.**

160 6.5.12.2 In addition to the applicable sections of these regulations, all persons operating
 161 or supervising the operation of a fluoroscopic x-ray system (including for FGI procedures)
 162 for clinical purposes on living humans shall be limited to persons meeting the applicable
 163 requirements of 6.3.1.6, 6.3.1.9, and Part 2, Section 2.4.5.5, and 2.6.1.5.

164 * * *

166 6.5.14 Registered Medical Physicist evaluations of fluoroscopic equipment.

167 6.5.14.1 ~~Fluoroscopic equipment shall be evaluated by a RMP within 90 days of~~
 168 ~~installation and following maintenance of the system that may affect the exposure rate.~~
 169 ~~Thereafter, the measurements shall be made as specified in Part 2, Section~~
 170 ~~2.5. Fluoroscopic x-ray systems shall have a certification evaluation performed by a~~
 171 ~~RMP under the frequency and conditions specified in Part 2, Section 2.5.~~

172 At a minimum these evaluations shall include:

- 173 (1) A measurement of entrance exposure rates that covers a representative sample
 174 of patient thicknesses, including those that are expected to drive the system to
 175 maximum output in all modes clinically used, including fluoroscopy, high-level
 176 control, and acquisition, when available. These measurements shall:
- 177 (a) For systems without automatic exposure control, be made utilizing a
 178 milliamperage and kVp typical of the clinical use of the fluoroscopic
 179 system;
- 180 (b) For systems with automatic exposure control, be made utilizing sufficient
 181 attenuating material in the useful beam to produce a milliamperage and
 182 kVp typical of the clinical use of the fluoroscopic system;
- 183 (2) A measurement and verification of compliance of maximum AKR for fluoroscopy
 184 and high-level control, if available. Measurements shall be made in accordance
 185 with Section 6.5.5.4.
- 186 (3) An evaluation of image quality in the modes necessary to achieve the clinical
 187 imaging task(s).
- 188 (4) An evaluation of the operation of the 5-minute timer, warning lights, interlocks,
 189 and collision sensors.
- 190 (5) An evaluation of the beam quality and collimation in the fluoroscopy mode.
 191 Additional evaluation may be needed where magnification impacts collimation.
- 192 (6) An evaluation of the availability and accuracy of technique indicators and
 193 integrated radiation dose displays.
- 194 (7) An evaluation of changes to the fluoroscopy system impacting radiation safety.

Commented [JSJ6]:

The added language clarifies that there may be conditions where other higher levels of supervision may be required or specified, depending on the qualifications of the individual being supervised and/or their scope of practice.

The terms direct, personal, and general supervision are defined in [Part 1 of the regulations](#).

Commented [JSJ7]:

To avoid duplicate and/or inconsistent language between Part 6 and Part 2, this section is simplified and revised to defer to Part 2 for certification evaluation frequency and conditions.

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195 (8) When operating in the spot image mode, an evaluation of the coefficient of
 196 variation of air kerma for both manual and automatic exposure control systems to
 197 ensure the value does not exceed 0.05.
 198
 199 * * *

200 **6.6 Requirements for use of general purpose x-ray imaging systems**

201 6.6.1 Administrative controls.

202 6.6.1.1 The requirements of Section 6.6 apply to all registrants using general diagnostic imaging
 203 systems, excluding the following:

- 204 (1) Fluoroscopy use which is described in 6.5;
 205 (2) Dental use which is described in 6.7;
 206 (3) Veterinary use which is described in 6.8;
 207 (4) Computed tomography use which is described in 6.9;
 208 (5) Mammography use which is described in 6.10.

209 6.6.1.2 Certification evaluation (~~testing~~inspection) requirements.

210 (1) Within 90 days of ~~use~~initial installation:

- 211 (a) Digital radiographic systems shall have an initial certification evaluation
 212 performed by a RMP;
 213 (b) Non-digital radiographic systems shall have an initial certification
 214 evaluation performed by a Qualified Inspector authorized for the specific
 215 machine type.
 216 (2) Periodic certification evaluations shall be performed at the frequency specified in
 217 Part 2, Section 2.5 by Qualified Inspectors authorized for the specific machine
 218 type.
 219 (3) Testing of display monitors which are under the control of the registrant shall be
 220 performed by or under the supervision of an RMP in accordance with 6.3.5.6.
 221 (4) Certification evaluations and testing shall follow nationally accepted standards or
 222 those recognized by the Department.
 223
 224 * * *

225 **6.7 Requirements for use of dental imaging systems.**

226 6.7.1 Administrative Controls.

227 6.7.1.1 Intraoral dental x-ray machines shall not be operated at less than a measured 51 kVp,
 228 after January 1, 2022.

229 6.7.1.2 All dental facilities using any type of x-ray equipment for dental x-ray imaging, shall:

Commented [JSJ8]:
 Language added for clarity and consistency with other rule sections.

Commented [JSJ9]:
 Language added for clarity and consistency with other rule sections.

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- 230 (1) Follow the applicable requirements of 6.3 and 6.4;
- 231 (2) Follow the applicable requirements of this Section 6.7
- 232 6.7.1.3 In addition to the requirements of 6.7.1.2, dental facilities using cone beam computed
 233 tomography (CBCT) x-ray equipment for dental x-ray imaging, shall also follow the
 234 requirements of Section 6.9 that are applicable to CBCT.
- 235 6.7.1.4 Quality assurance. In addition to the general quality assurance provisions in Section 6.3,
 236 the following requirements apply to a dental facility:
- 237 (1) If using a filmless system, maintain and operate PSP and DDR systems
 238 according to manufacturer specifications, or nationally accepted standards.
- 239 (2) If using film:
- 240 (a) Maintain a light tight darkroom or processor system;
- 241 (b) Use proper safelighting and safeguards; and
- 242 (c) Evaluate darkroom or processor system integrity and daylight loading
 243 systems for film fog every six months and after a change that may impact
 244 film fog.
- 245 ~~6.7.1.5~~ Each individual who operates a dental x-ray imaging system shall meet the applicable
 246 adequate radiation safety training and experience requirements of **Part 2, sections** 2.6.1,
 247 ~~in particular and specifically~~ 2.6.1.11.
- 248 (1) Records of training shall be maintained for inspection by the Department in
 249 accordance with Part 2, Section 2.6.6.4.
 250 * * *
 251
- 252 (3) Field Limitation for Intraoral Dental X-ray Systems.
- 253 (a) Each x-ray imaging system designed for use with an intraoral image
 254 receptor shall be provided with means to limit the beam such that:
- 255 (i) If the minimum SSD is 18 cm or more, the x-ray field, at the
 256 minimum SSD, shall be containable in a circle having a diameter
 257 of no more than 7 cm; and
- 258 (ii) If the minimum SSD is less than 18 cm, the x-ray field, at the
 259 minimum SSD, shall be containable in a circle having a diameter
 260 of no more than 6 cm.
- 261 ~~(b) Excluding hand-held units, endodontic procedures, and those~~
 262 ~~procedures which require a broader exposure field, after January 1,~~
 263 ~~2025, only rectangular collimators shall be used for routine intraoral~~
 264 ~~dental imaging.~~
 265 * * *
 266
- 267 6.7.3 Each dental x-ray imaging system shall meet the following radiation exposure operational control
 268 requirements.

Commented [JSJ10]:

Existing language is amended for clarity. The header information in 2.6.1 and 2.6.1.1 provide broad generic requirements applicable to all operators. Provision 2.6.1.11 is specific to dental use.

Commented [JSJ11]:

This provision was originally adopted in November 2019, with a future effective date of January 2025. The future date was intended to allow for additional data gathering by the department and to give facilities time to budget and purchase equipment that would allow them to come into compliance. Following additional review and evaluation by the department, we are proposing to strike this provision from the rule for reasons discussed below.

In 2022, the department sent a survey to dental facilities to evaluate barriers to implementation of the collimator requirement. Facilities identified concerns over possible imaging errors and the need for additional staff training (which was identified during the original rulemaking). Facilities also identified equipment availability associated with supply chain issues as a concern. This did not appear to be a problem during the initial rulemaking.

While the use of rectangular collimators for patient dose reduction is supported by research and is recommended by the American Dental Association (ADA) and the National Council on Radiation Protection (NCRP) and other entities, the department feels that retaining this requirement is no longer feasible. A number of companies that previously manufactured rectangular collimators have discontinued distributing them. Being aware of this equipment shortage, a Colorado based company approached the department with a possible plan to manufacture and sell rectangular collimators. After additional consultation with the U.S. Food and Drug Administration (FDA), it was determined that this would be challenging as collimators are considered part of the x-ray device that must be individually approved (by FDA) for each machine make and model. Further, the FDA indicated that machines would require recertification by a qualified inspector resulting in additional facility costs.

The unavailability of rectangular collimator equipment in the market along with additional unexpected recertification costs was not anticipated during the original rulemaking. Due to these challenges, the department proposes that the provision be removed from the rule.

CODE OF COLORADO REGULATIONS
Hazardous Materials and Waste Management Division

6 CCR 1007-1 Part 06

- 269 6.7.3.1 Cephalometric and volumetric beam dental x-ray systems shall meet the radiation
 270 exposure control requirements of 6.6.3:
- 271 6.7.3.2 Intraoral and panoramic dental x-ray systems shall meet the following radiation exposure
 272 control requirements:
- 273 (1) Timers.
- 274 (a) Means shall be provided to terminate the exposure at a preset time
 275 interval, preset product of current and time, a preset number of pulses, or
 276 a preset radiation exposure to the image receptor.
- 277 (b) It shall not be possible to make an exposure when the timer is set to a
 278 "zero" or "off" position if either position is provided.
- 279 (c) Termination of exposure shall cause automatic resetting of the timer to
 280 its initial setting or to "zero".
- 281 (d) Timer Reproducibility.
- 282 (i) With a timer setting of 0.5 seconds or less, the average exposure
 283 period (T_{avg}) shall be greater than or equal to five (5) times the
 284 maximum exposure period (T_{max}) minus the minimum exposure
 285 period (T_{min}) when four (4) timer tests are performed: $T_{avg} \geq$
 286 $5(T_{max} - T_{min})$.
- 287 (2) X-ray Control for Intraoral or Panoramic Dental X-ray Systems.
- 288 (a) Means shall be provided to initiate the radiation exposure by a deliberate
 289 action on the part of the operator, such as the depression of a switch.
 290 Radiation exposure shall not be initiated without such an action.
- 291 (b) A control shall be incorporated into each x-ray imaging system such that
 292 an exposure can be terminated by the operator at any time, except for
 293 exposures of one-half (0.5) second or less.
- 294 (c) Exposure control location and operator protection.
- 295 Except for units designed to be hand-held during operation, the exposure
 296 control shall allow the operator to be:
- 297 (i) Behind a protective barrier at least 2 meters (more than 6 feet)
 298 tall; or
- 299 (ii) At least 2 meters (more than 6 feet) from the patient, x-ray tube,
 300 and the useful beam, while making exposures.
- 301 (d) The requirements of Appendix 6E shall be followed for x-ray equipment
 302 intended to be hand held during operation.
- 303 * * *
- 304
- 305 **6.8 Requirements for use of a veterinary medicine imaging system.**
- 306 6.8.1 Administrative Controls.

Commented [JSJ12]:

This is not a new provision. The provision was an unnumbered paragraph below (2)(c)(ii) but is better determined to be a stand alone provision. There are no changes to requirements as a result of this formatting change.

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6 CCR 1007-1 Part 06

6.8.1.1 In addition to the provisions of 6.3 and 6.4, the requirements of this 6.8, and as appropriate also 6.5 and 6.9, apply to equipment and associated facilities used for veterinary x-ray imaging.

6.8.1.2 Each individual who operates a veterinary x-ray imaging system shall meet the applicable adequate radiation safety training and experience requirements of ~~Part 2.6.1, in particular 2.6.1.12~~ **Part 2, sections 2.6.1 and specifically 2.6.1.13.**

* * *

6.9 Requirements for use of computed tomography (CT) imaging systems.

* * *

6.9.3.5 PET CT and SPECT CT Systems

CT systems solely used for localization and calculation of attenuation coefficients in nuclear medicine studies shall meet the requirements in Sections 6.9.1, 6.9.2.4, 6.9.3.1, 6.9.3.3, and 6.9.4.1 unless otherwise exempted below:

(1) In lieu of 6.9.4.2, a RMP shall complete a ~~performance~~**certification** evaluation on the CT system following nationally recognized guidelines or those of the manufacturer at intervals not to exceed 12 months.

* * *

6.9.3.6 Veterinary CT Systems.

CT systems, including CBCT systems, solely used in non-human imaging shall meet the requirements of 6.9.4.1(1) (area radiation surveys) and are otherwise exempt from the standards of Section 6.9.

6.9.3.7 Cone Beam Computed Tomography Systems.

(1) CBCT facilities shall meet the following requirements, as applicable:

(a) Excluding veterinary imaging systems the minimum source-skin distance for CBCT imaging systems shall be consistent with the applicable requirements in 21 CFR subchapter J;

(b) 6.4;

(c) 6.6.3.1, 6.6.3.2, 6.6.3.4(1), and 6.8.2.1(4); and

(d) 6.9.1.3, 6.9.2.1, 6.9.2.3, 6.9.3.2, and 6.9.3.8 as applicable.

(2) Beam alignment.

(a) The x-ray field in the plane of the image receptor shall not exceed beyond the edge of the image receptor by more than 2 percent of the SID, when the axis of the x-ray beam is perpendicular to the plane of the image receptor.

(b) In addition, the center of the x-ray field shall be aligned with the center of the image receptor to within 2 percent of the SID.

Commented [JSJ13]:

This provision is updated to clarify wording and correct a cross-reference error due to prior renumbering in Part 2.

Commented [JSJ14]:

For consistency in the rule, the term "certification evaluation" is used.

CODE OF COLORADO REGULATIONS
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6 CCR 1007-1 Part 06

346 (3) A **performancecertification** evaluation shall be performed by, or under the direct
 347 supervision of a RMP.

348 (a) The evaluation shall follow nationally recognized standards and
 349 tolerances or those recognized by the Agency.

350 (b) The evaluation shall be performed in accordance with Part 2, Section
 351 2.5.1.

352 (c) The facility shall maintain documentation of the established standards
 353 and tolerances and **testingcertification evaluation** results.
 354
 355 * * *

356 CT surveys, **performancecertification** evaluations, routine QC, and operating procedures

357 6.9.4 Each computed tomography facility shall conduct required surveys, **performancecertification**
 358 evaluations, and routine QC.

359 6.9.4.1 Radiation Protection Evaluations.

360 (1) An area radiation survey or measurement shall be made by, or under the direct
 361 supervision of, a registered medical physicist or QE, to verify and document
 362 compliance with Part 4, Section 4.14 and 4.15 under the following conditions:

363 (a) All CT x-ray systems installed shall have an area radiation survey or
 364 measurement completed by, or under the direct supervision of, the RMP
 365 or QE within 90 days of installation;

366 (b) Any change in the facility or equipment that might cause a significant
 367 increase in radiation hazard; or

368 (c) Upon first use of a portable or mobile CT imaging system, consistent with
 369 the applicable requirements of 6.3.2.4.-.

370 (d) The registrant shall obtain from the registered medical physicist, a written
 371 report of the measurements required by 6.9.4.1, and a copy of the report
 372 shall be made available to the Department upon request.

373 6.9.4.2 CT System performance **testing and certification** evaluations.

374 (1) The testing of the CT x-ray system shall be performed by, or under the personal
 375 supervision of, ~~a registered medical physicist~~ **RMP** who assumes responsibility
 376 and signs the final performance **testing and certification** evaluation report.

377 (2) Evaluation standards and tolerances shall be established by the registered
 378 medical physicist and maintained by the facility. The standards and tolerances
 379 shall be:

380 (a) In accordance with protocols published by nationally recognized
 381 organizations (for example, AAPM Report 96), unless the registered
 382 medical physicist determines that a particular recommendation of such
 383 report is not warranted for the clinical tasks for which the equipment will
 384 be used;

Commented [JSJ15]:

Similar to other changes in Part 6, the rule is updated to use more consistent terminology for certification evaluations.

Commented [JSJ16]:

Consistent with other changes in the rule, the term certification evaluation is used.

Commented [JSJ17]:

Remove unneeded period.

Commented [JSJ18]:

Consistent with other changes in the rule, the term certification evaluation is used.

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Hazardous Materials and Waste Management Division

6 CCR 1007-1 Part 06

(3) The **certification** evaluation ~~offer~~ a CT x-ray system shall be performed by or under the personal supervision of an RMP in accordance with Part 2, Section 2.5.1. ~~prior to use on human patients and within 90 calendar days of:~~

(a) ~~Initial installation or acceptance testing; or~~

(b) ~~Any change or service that could cause a change in the radiation output (dose indices) or image quality.~~

* * *

6.10 Requirements for use of mammography and other x-ray based breast imaging systems.

6.10.1 Administrative Controls.

6.10.1.1 The requirements of 6.3 and 6.4 apply to all mammography and x-ray based breast imaging equipment and associated facilities.

6.10.1.2 Each facility performing mammography (as defined in Section 6.2) shall:

(1) Use imaging systems that comply with the Mammography Quality Standards Act of ~~1988~~**1998**.

(2) Meet the requirements of Subpart B of 21 CFR 900;

(3) Ensure that 21 CFR 900 quality control and quality assurance standards for maintaining viewing conditions and interpretation of an image are met.

6.10.1.3 Each RMP who conducts a mammography facility and x-ray machine certification evaluation shall meet the requirements of Part 2, Appendix 2I.

6.10.1.4 Each Individual who performs a mammography examination shall meet the ~~adequate radiation safety~~ training and experience requirements of Part 2, Section 2.4.5.4, ~~2.6.1.5 and Appendix 2M~~.

6.11 Use of dual-energy x-ray absorptiometry (DXA) bone densitometry systems.

6.11.1 In addition to the provisions of 6.3 and 6.4, the requirements of 6.11 apply to all facilities using DXA machines.

6.11.2 DXA Systems shall be:

6.11.2.1 Certified by the manufacturer pursuant to the Medical Device Act and Subchapter C – Electronic Product Radiation Control (EPRC) of Chapter V of the Federal Food, Drug and Cosmetic Act;

6.11.2.2 Registered in accordance with Part 2 of these regulations; and

6.11.2.3 At a minimum, maintained and operated in accordance with the manufacturer's specifications

6.11.3 Operator requirements.

6.11.3.1 ~~In addition to the minimum qualifications outlined in 6.3.1.6 of these regulations, operators shall complete training specific to patient positioning and the operation of the~~

Commented [JSJ19]:

Based on stakeholder feedback, language is clarified to refer to Part 2 of the regulations which contain certification evaluation criteria for all machine types, along with specific criteria for certain types of machines.

By deferring to Part 2 for the primary CE criteria, it will avoid potential conflicts between Part 6 and Part 2. Sections 2.5.1.4 and 2.5.1.5 address the certification frequency and requirements following an initial (new CT system) installation versus ongoing, routine, or post repair/maintenance of existing CT systems.

Commented [JSJ20]:

Section 6.10.1 has been adjusted for formatting and alignment of text.

Commented [JSJ21]:

Correction of date to reflect the current/reaffirmed version of MQSA.

Commented [JSJ22]:

This provision is revised in parallel with proposed changes to Part 2 relating to mammography.

Commented [JSJ23]:

Language is revised for clarity.

CODE OF COLORADO REGULATIONS
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6 CCR 1007-1 Part 06

~~DXA-system.~~ Each operator of a bone densitometry machine shall meet the
adequate radiation safety training and experience requirements of Part 2, Section
2.4.5.3, and Part 2, Appendix 2F.

* * *

[END OF RULE – NO FURTHER CHANGES TO PART 6 BEYOND THIS POINT]



COLORADO

Board of Health

Department of Public Health & Environment

Notice of Public Rule-Making Hearing

February 21, 2024

NOTICE is hereby given pursuant to the provisions of Section 24-4-103, C.R.S., that the Colorado Board of Health will conduct a public rule-making hearing on February 21, 2024 at 10 a.m. held remotely over [Zoom](#), to consider revisions to 6 CCR 1007-1 Part 2, Radiation Control - Registration of Radiation Machines, Facilities and Services, and Part 6, Radiation Control- X-Ray Imaging in the Healing Arts. The proposed rule has been developed by the Hazardous Materials and Waste Management Division of the Colorado Department of Public Health and Environment pursuant to Sections 25-1.5-101(1)(k), 25-1.5-101(1)(l), 25-11-103, 25-11-104, and 25-1-108, C.R.S.

The agenda for the meeting and the proposed amendments will also be available on the Board's website, <https://cdphe.colorado.gov/board-of-health> at least seven (7) days prior to the meeting. The proposed rules, together with the proposed statement of basis and purpose, specific statutory authority and regulatory analysis will be available for inspection at the Colorado Department of Public Health and Environment, 4300 Cherry Creek Drive South EDO-A5, Denver, Colorado 80246-1530 at least five days prior to the hearing. Copies of the proposed rules may be obtained by contacting the Colorado Department of Public Health and Environment, Hazardous Materials and Waste Management Division, 4300 Cherry Creek Drive S., Denver, CO 80246, 303-692-3454.

The Board encourages all interested persons to participate in the hearing by providing written data, views, or comments. Written testimony is encouraged; oral testimony will be received only to the extent the Board finds it necessary. For those that are permitted to provide oral testimony, the time may be limited to 3 minutes or less. Testimony is limited to the scope of the rulemaking hearing. Pursuant to 6 CCR 1014-8, §3.02.1, written testimony must be submitted no later than five (5) calendar days prior to the rulemaking hearing. Written testimony must be received by 5:00 p.m., Thursday, February 15, 2024. Persons wishing to submit written comments should submit them to: Colorado Board of Health, ATTN: Board of Health Program Assistant, Colorado Department of Public Health and Environment, 4300 Cherry Creek Drive South EDO-A5, Denver, Colorado 80246-1530 or by e-mail at: cdphe.bohrequests@state.co.us

Dated this 4th day of January, 2024.

Ann M.
Hause

Ann Hause
Interim Board of Health Administrator

Digitally signed by Ann
M. Hause
Date: 2024.01.04
13:29:21 -07'00'

Notice of Proposed Rulemaking

Tracking number

2024-00016

Department

1000 - Department of Public Health and Environment

Agency

1007 - Hazardous Materials and Waste Management Division

CCR number

6 CCR 1007-1 Part 06

Rule title

RADIATION CONTROL - X-RAY IMAGING IN THE HEALING ARTS

Rulemaking Hearing

Date

02/21/2024

Time

10:00 AM

Location

4300 Cherry Creek Drive South, Denver, CO 80246 or <https://us02web.zoom.us/join/join?from=addon>
GhrjlvGNdegNvPKBx9kE33cVnwQYb6#/registration

Subjects and issues involved

Changes to the Part 6 rule are being proposed to incorporate and align with related changes associated with the Part 2 rule surrounding fluoroscopy operators, and to clarify that purposeful exposure to living human research subjects for research purposes is to be authorized by specified individuals and meet certain additional requirements of Part 2. Language is revised to incorporate more consistent language and to streamline and reduce redundancy in language regarding the frequency and conditions for routine certification evaluations (machine inspections) by deferring to Part 2 for those requirements. The provision in current rule requiring the use of rectangular collimators for most dental intraoral imaging procedures by 2025 is removed due, primarily, to the discontinued manufacturing/lack of availability on the market of universal add-on collimator devices.

Statutory authority

25-1.5-101(1)(k), 25-1.5-101(1)(l), 25-11-103, 25-11-104, and 25-1-108, C.R.S.

Contact information

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Title

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**COLORADO**Department of Public
Health & Environment

To: Members of the State Board of Health

From: James H. Grice, Radiation Program Manager, Hazardous Materials and Waste Management Division
James S. Jarvis, Regulatory Lead, Hazardous Materials and Waste Management Division

Through: Tracie M. White, Division Director *TMW*

Date: December 20, 2023

Subject: Request for a Rulemaking Hearing concerning 6 CCR 1007-1 Part 6, X-ray imaging in the healing arts and 6 CCR 1007-1, Part 2, Registration of radiation machines, facilities and services, with a request for a rulemaking hearing to be set for February 21, 2024.

The Division is proposing changes to x-ray machine regulations Part 6 and Part 2 primarily to clarify existing provisions, requirements and language in the rules relating to provisional mammographers, limited scope operators, routine certification evaluations, and to incorporate cardiac catheterization lab personnel into the current fluoroscopy operator registration. Following additional consideration, the Division is also proposing to remove language for a future requirement mandating the use of rectangular collimators for most dental intra-oral imaging due, primarily, to an inability for the regulated community to achieve compliance as a result of the lack of equipment availability. This requirement was added during the prior (2019-20 rulemaking) and becomes effective in 2025 if no change is made.

During the stakeholder comment period we received two written comments from stakeholders regarding the Part 6 proposed change in 6.7.2.3(3)(b) that would remove the requirement for rectangular collimators during routine dental intra-oral imaging procedures which is currently scheduled to go into effect January 1, 2025. One commenter supports the proposal to remove this provision citing greater potential for repeat examinations due to operator error in aligning the imaging port with the image receptor along with unreasonable burdens to train individuals to ensure this does not happen. The other commenter stated their opposition to removing provision 6.7.2.3(3)(b) noting the patient dose reduction benefits are well established and recognized by multiple professional associations, that voluntary adoption by the dental community is not likely, and that regulatory action by the department is necessary.

While we continuously support efforts to identify methods that will help reduce human exposure as outlined further in the rule package, we are proposing to remove this provision primarily due to the lack of market availability of universal add-on type collimator systems originally contemplated during the 2019-20 rulemaking. Secondly, consultation with representatives of the U.S. Food and Drug Administration (FDA) indicate that add-on devices, such as collimators, become part of the tube assembly that must be recertified under federal rules through the FDA similar to other components of an x-ray system.

Prior to and following the stakeholder process, our Radiation Advisory Committee reviewed and discussed the proposed rule changes and supported moving the rule forward as proposed and with no specific concerns opposing the proposed changes.

Since these rule changes affect select areas of the rule, only those impacted sections are included in the proposed draft. Throughout the rule, new text appears as red bold text while deleted language shows as strikethrough text.

The Radiation Program respectfully requests that the Board of Health set a rulemaking hearing for February 21, 2024 for these rules.

**DRAFT STATEMENT OF BASIS AND PURPOSE
AND SPECIFIC STATUTORY AUTHORITY**

for Amendments to

6 CCR 1007-1, Part 02, Registration of radiation machines, facilities and services
6 CCR 1007-1, Part 06, X-ray imaging in the healing arts;

Basis and Purpose.

Although there is some overlap in the proposed changes between Part 2 and Part 6 for this rulemaking, the updates for each regulatory part are described in further detail in separate sections below.

Part 2

Part 2 contains broad and specific requirements applicable to all x-ray machine facilities for any purpose, including non-medical and medical uses, it is applicable to those providing services to facilities that use x-ray machines (including inspection or repair), and also incorporates qualifications, training, and state registration requirements for certain operators of x-ray machines. For this rulemaking, most proposed changes apply to medical uses of machines.

As outlined for each section below, changes to the Part 2 rule are proposed to improve the clarity and understanding of certain rule requirements. This includes updates to select definitions, reaffirming that facility registration is an annual process, clarifying language and slightly reorganizing tables pertaining to machine certification evaluations, adding clarifying language to ensure that the department is notified promptly when a machine fails inspection criteria as specified in statute.

Without changing current requirements, we are also revising language to clarify that the body of the rule contains requirements for fully qualified mammographers, and the appendix (2M) is intended for use by those in training to become qualified mammographers.

The rule is clarified to indicate that training on imaging of the abdomen, and performing abdominal imaging in the field may be performed by qualified Limited Scope Operators (LSOs), consistent with most training programs and practice at facilities in Colorado. Abdominal imaging is one of the more common exams performed at facilities that employ LSOs. The level of supervision while LSOs are undergoing training is also clarified, consistent with current training programs and practice.

The registration process and criteria for fluoroscopy operators is amended to incorporate certain qualified and nationally registered individuals working in cardiac catheterization labs in Colorado. These individuals are and have been performing certain aspects of fluoroscopy operation under supervision by a physician at many Colorado facilities for many years. Under the present rule, these individuals fall outside of current criteria for registered fluoroscopy operators and registration of these individuals is evaluated on a case-by-case basis.

Summary of Part 2 changes by section

Changes throughout Part 2

- The word “Part” is added to the rule when there are references to federal (CFR) rules. Typographical errors, omissions, and alignment of text are also being corrected.

Changes to Section 2.1

- Updates are made to rulemaking adoption and effective dates and links to regulatory web pages.

Changes to Section 2.2 (Definitions)

- We are modifying the definition “Direct supervision” to remove language pertaining to mammography that is redundant with the revised Appendix 2M changes. Language is added to Appendix 2M to clarify the level of supervision during certain portions of an individual’s mammography training. This is not a change from the current requirements;
- The term “Personal supervision” is used in several sections of Part 2 and other rules, and therefore a reference to the Part 1 definition is added to Part 2 for clarity and understanding;
- We are revising the definitions “Provisional mammographer” and “Qualified mammographer” to reference the applicable sections in Appendix 2M or 2.4.5.4, consistent with other changes to these sections;
- Minor additions and clarifications are made to the “Radiologic technologist” and similar abbreviations consistent with language used by a primary certifying organization - the American Registry of Radiologic Technologists (ARRT).

Changes to Section 2.3.2

- Section 2.3.2 is amended using plain language for clarity and understanding, and for consistency with the 2009 CRCPD Part B model rule.

Changes to Section 2.4.1(2)

- Section 2.4.1(2) is amended to include reaffirming and clarifying language that facility registrations are an annual process, consistent with current practice and the current annual fee payment cycle in Part 12 of the regulations.

Changes to Section 2.4.5.4

- Section 2.4.5.4 pertains to mammographers (operators of x-ray imaging systems for mammography imaging) and is amended to improve the clarity and intent of the rule consistent with current practices and requirements and in conjunction with parallel changes to Appendix 2M. The rule is clarified to indicate that Appendix 2M will be used solely for the registration of individuals who are in training to become qualified mammographers (known as “provisional mammographers”) and Section 2.4.5.4 will provide requirements for individuals who are considered qualified mammographers.

Section 2.4.5.4 currently provides requirements for individuals who are in training to become fully qualified and nationally registered mammographers consistent with state and federal requirements. Under current rule, individuals in training are required to register with the department as “provisional mammographers” until they become nationally certified and registered. We are revising 2.4.5.4 and the associated Appendix 2M to improve the clarity and understanding of the requirements and to follow current processes for registration used by the department. We are not making any changes to the overall requirements with this proposed change.

Changes to Section 2.4.5.5

- Section 2.4.5.5 is being revised to clarify requirements pertaining to fluoroscopy operators and incorporate qualified individuals as fluoroscopy operators under the

revised Appendix 20, as these individuals are not adequately captured by the current rule. The added language of 2.4.5.5 and subsections will allow the department additional flexibility in implementing the rule for individuals who do not fall within the current criteria for fluoroscopy operators.

Changes to Section 2.5 and Table 2-1

- Section 2.5 and Table 2-1 are being updated to align and ensure consistency between the text of the rule and table. This section of the rule provides the certification evaluation (routine inspection) frequencies for all radiation machine types. There has been some confusion with regard to the timing of certification evaluations (inspections) for new machine installations versus already installed machines and whether a machine can be used for imaging exams prior to inspection. New installations of certain machines including Computed Tomography and Mammography systems require inspection prior to use on humans, while other systems may be used on humans following initial installation and testing by the manufacturer or service company. All systems are required to have a certification evaluation completed within 90 days of installation. We are proposing updates to section 2.5 to clarify the existing requirements and improve understanding. There is no change to the current frequency of certification evaluations (inspections) with these updates.

Changes to Section 2.5.2.2

- We are clarifying Section 2.5.2.2 to restate a statutory requirement that notification to the department is required within 3 days for machines that fail requirements. State statute has required this notification for many years.

Changes to Section 2.6.1.4

- We are adding examinations of the abdomen to section 2.6.1.4 as an imaging procedure that may be performed by department registered limited scope operators (LSOs). This is consistent with current practice in Colorado facilities that train and employ LSOs. Limited scope operators must continue to adhere to the requirements of 2.6.1.4(2).

Changes to Section 2.6.1.6

- We are revising Section 2.6.1.6, consistent with parallel changes to Appendix 2M. Language is added to clarify that registered provisional mammographers in training can operate machines while under the specified level of supervision. While an individual is undergoing training, the rule specifies that personal (in the room) supervision is required for the initial 20 exams and direct supervision is required after the initial exams, consistent with federal Mammography Quality Standards Act (MQSA) requirements.

Changes to Appendix 2D, Section 2D.2.2

- In parallel with the change in 2.6.1.4 discussed above, we are clarifying the supervision requirements for Limited Scope Operators (LSOs) who are in training, to be consistent with how students are taught and how they operate in x-ray facilities that employ LSO's. We are updating 2D.2.2 of Appendix 2D to reflect that direct (in the facility) supervision is required rather than personal (in the exam room) supervision. The direct supervision and personal supervision terms are defined in Section 2.2 and Part 1.

Changes to Appendix 2F, Section 2F.2.4

- We are deleting the reference to the passing score for the American Registry of Radiologic Technologists (ARRT) Bone Densitometry Equipment Operators (BDEO) exam in Section 2F.2.4 of the rule. The ARRT, not the department, determines the passing score for the BDEO exam. Also, the ARRT recently provided notification that they are transitioning to a “scaled score” for most testing results rather than a percentage based scoring. Removing the current “percent” based passing score value from Part 2 will eliminate any future conflict between the rule and ARRT passing scores.

Changes to Appendix 20

- The 2019-20 amendment to Part 2 added a fluoroscopy operator registration process for properly trained and qualified Physician Assistants (PA's) and Advanced Practice Registered Nurses (APRN's) to become operators of fluoroscopy systems, consistent with their scope of practice and licensing. The 2019-20 changes did not, at the time, recognize some other allied healthcare personnel who have and continue to provide various levels of support involving fluoroscopy systems as part of a medical procedure in cardiac catheterization labs throughout Colorado.

Appendix 20 is revised to incorporate into the existing fluoroscopy registration process, fully qualified and nationally certified cardiac catheterization lab (“cath lab”) professionals who meet similar training and experience requirements as PAs and APRNs as outlined in current rule. Presently, these cath lab personnel are evaluated on an individual basis and may be granted registration as fluoroscopy operators when appropriate. The proposed rule changes would streamline this process by recognizing the cardiac cath lab personnel in regulation, and reflect the current state of practice at facilities in Colorado.

Appendix 20 continues to require that operation of fluoroscopy machines be in accordance with the operator's level of training, their respective scope of practice and under the appropriate level of supervision.

Part 6

Part 6 is specific to x-ray machine use in the healing arts (medical use) for diagnostic purposes and contains requirements for periodic testing, quality control, and requirements for operation of x-ray machines at medical facilities to help ensure they are safe for patients, operators and members of the public.

Changes to the Part 6 rule are being proposed to incorporate and align with related changes associated with the Part 2 rule surrounding fluoroscopy operators, and to clarify that purposeful exposure to living human research subjects for research purposes is to be authorized by specified individuals and meet certain additional requirements of Part 2. Language is revised to incorporate more consistent language and to streamline and reduce redundancy in language regarding the frequency and conditions for routine certification evaluations (machine inspections) by deferring to Part 2 for those requirements. The provision in current rule requiring the use of rectangular collimators for most dental intraoral imaging procedures by 2025 is removed due, primarily, to the discontinued manufacturing/lack of availability on the market of universal add-on collimator devices.

Summary of Part 6 changes by section

Changes throughout Part 6

- Minor formatting updates and corrections are made to Part 6.

Changes to Section 6.1

- Rulemaking adoption and effective dates and links to regulatory web pages are updated for the current rulemaking.

Changes to Section 6.3.1.6

- We are adding provision (4) to section 6.3.1.6 to allow machine operation by specific department registered fluoroscopy operators meeting the applicable Appendix 20 requirements. More specifically, and as outlined in changes proposed for Part 2, the change permits trained and qualified, nationally certified cardiac catheterization lab personnel to register as fluoroscopy operators.

Changes to Section 6.3.1.7

- We are adding language to section 6.3.1.7 to clarify that Part 6 applies to research uses of x-ray machines when it involves purposeful exposure to living human research subjects.

Changes to Section 6.5.12.1

- We are rephrasing section 6.5.12.1 to clarify that operation of fluoroscopy systems shall be done under direct (i.e., in the building) supervision, except where it is otherwise specified in regulation. The scope of practice for fluoroscopy operators varies and may require a higher or lower level of supervision or autonomy during operation. By deferring to other parts of the regulations, including those that require following the applicable scope of practice, allows flexibility in the rule.

Changes to Section 6.5.14.1

- We are revising section 6.5.14.1 to remove redundant language for certification evaluations (inspections) of fluoroscopy machines, and instead will defer to Part 2 for these requirements.

Changes to Section 6.6.1.2

- For consistency in terminology used in the rule, in 6.6.1.2 and throughout other sections of the rule, we are modifying the language to use "inspection" instead of "testing".

Changes to Section 6.7.2.3(3)(b)

- We are proposing to rescind provision 6.7.2.3(3)(b) that requires rectangular collimators when performing most intraoral dental imaging procedures. This provision was added during the 2019-20 rulemaking with an effective date of January 1, 2025. To our knowledge, Colorado is currently the only state to require the use of rectangular collimators for routine dental intraoral imaging. Due to a lack of market availability for universal add-on type collimator devices along with implementation concerns that may be needed to meet FDA requirements when using such devices, implementation and compliance by January 1, 2025 is believed to be unfeasible at this time. Refer to additional information below for further details.

Background and basis for rectangular collimators and past rulemaking

The 2019-20 rulemaking for Part 6 incorporated a requirement for use of rectangular collimators in routine dental intra-oral imaging at the suggestion of stakeholders to help reduce patient dose. The U.S. Food and Drug Administration (FDA), has estimated that intraoral imaging is the most common x-ray image taken in dentistry with over 100 million imaging exams taken each year in the United States^a. While dental intraoral imaging is common with most patients being imaged on an annual basis (as determined by the dental practitioner), patient effective dose from such imaging is low when using modern digital based systems (typically between 0.1 and 0.8 millirem^c) and studies show it is reduced further when using rectangular collimators. Modern dental intraoral imaging systems commonly use a rectangular image receptor (digital or film), but the most common x-ray collimators - devices which shape the x-ray beam as it exits the tube head - continue to be round. A round x-ray beam combined with the rectangular image receptor results in a mismatch of the shapes resulting in dose to the patient that does not contribute to the image. As noted in the [2019-20 Part 6 rulemaking package](#)^b (that added the rectangular collimator requirement to current rule), the American Dental Association (ADA) report in 2006 suggested that patient dose can be reduced by up to fivefold for the most common radiographs. Other studies have generally confirmed dose reductions by 50% or more when using rectangular collimators. The effective doses from a typical intraoral exam represent approximately 0.1% of the annual average background dose of 620 mrem^d to individuals in the U.S. and contribute 0.2% of the annual average dose from medical procedures^d.

In June of 2022 and as a follow up to the 2019-20 Part 6 rulemaking and previous Board of Health request, the x-ray certification unit developed and sent a survey to dental facilities to evaluate the current implementation status and to help identify barriers to compliance and implementation for rectangular collimators at registered facilities. The survey was sent to approximately 2,707 dental registrants in Colorado and approximately 7.3% (198) registrants responded to the survey. Survey results are summarized in Table 1 below.

Table 1. Summary of rectangular collimator key survey results sent to dental facilities in June 2022. Note that some percentage numbers have been rounded.

Rectangular collimator survey question	Response of those participating in survey
1. Regarding which method the facility intends to use to implement the rectangular collimator requirement:	<ul style="list-style-type: none"> • 83% of respondents intend to use an add-on rectangular collimator device • 12% of respondents intend to use a combination of new machine replacement and add-on collimators • 5% of respondents intend to replace the entire machine
2. Regarding the key barriers or concerns to implementing the rectangular collimator requirement:	<ul style="list-style-type: none"> • 47% of respondents indicated that cost was the primary barrier • 12% of respondents noted no foreseen barriers • 11% of respondents were unaware of the requirement • 8% of respondents noted that training was a concern • 22% of respondents indicated that other items/issues were a barrier, including supply availability, other concerns, or did not believing in the science behind the use of rectangular collimators.
3. Regarding whether respondents were familiar with the new (2019-20 rulemaking) requirement for rectangular collimators:	<ul style="list-style-type: none"> • 46% were somewhat familiar with the requirement • 36% of facilities were not familiar with the requirement • 17% were very familiar with the requirement
4. Regarding the number (~fraction) of rectangular collimators a respondent has already installed on the facilities machines:	<ul style="list-style-type: none"> • 92% of respondents indicated that no collimators are installed on their machines • 6% of respondents indicated that all machines have collimators installed • 2% of respondents indicated that $\frac{1}{2}$ of machines have collimators installed • 1% of respondents indicated that $\frac{1}{4}$ of machines have collimators installed
5. Regarding whether the facility considers itself to be in an underserved / under resourced community:	<ul style="list-style-type: none"> • 72% of respondents indicated that they did not consider their facility to be in an under resourced community • 20% of respondents indicated that they considered their facility under resourced in a rural community • 8% of respondents indicated that they considered their facility under resourced in an urban community

Discussion of collimator survey results

Overall, the survey results indicate that most (63%) of respondents were at least familiar with the requirement for rectangular collimators in the current rule with the provision having a 2025 effective date. Despite this, less than 10% of respondents indicated that they had installed rectangular collimators on one or more machines, and a high number - 92% - of respondents indicated they had not installed rectangular collimators on any machine. This later issue is of concern due to current 2025 effective date for this requirement along with device availability in sufficient quantities.

While most questions in the survey were multiple choice, question 2 above was “open ended” allowing for specific text input and feedback from stakeholders regarding the barriers to implementation. Respondents most frequently cited that there would be an increase in “cone cuts” (cutting off portions of the image due to a smaller radiation field and need for greater accuracy), resulting in having to repeat some images. Repeating images is something that should be avoided with any radiographic imaging in general as each image contributes to radiation dose. However, if rectangular collimator devices are used and are able to reduce exposure by half (or more) to begin with, repeating even 25% of the images will still result in a potential lower total dose to the patient by about a third (36%). Data shows that rectangular collimators appear to have a greater than 50% dose reduction, in which case the overall total patient dose reduction will be even larger, even accounting for some repeat images. At least one retrospective study has shown that some images with cone cuts may still contain adequate diagnostic information.

When the collimator provision was initially proposed in the prior rulemaking, the department felt that the most cost-effective approach to implementing rectangular collimators was for facilities to purchase one or more universal add-on type collimator devices that could be easily installed by the operator on existing x-ray machines. This approach was thought to allow flexibility, where collimators could be removed by the operator to perform any specialized wide view imaging, such as for endodontic procedures. At the time of the original rulemaking, such devices appeared to be readily available on the market with multiple websites advertising them at a cost of around \$150 per unit. For an average dental registrant having three intraoral machines, the total cost would be on the order of \$450 per facility. The option to purchase fewer universal add-on collimator devices that could be shared amongst machines was also a consideration and is not prohibited by the 2020 rule. To use rectangular collimator devices properly it was recognized in the prior rulemaking that facilities would need to spend some time training on the new collimators due to tighter alignment tolerances and need for greater accuracy.

Basis for current rulemaking change with regard to rectangular collimators

While the radiation program continues to support the science and principles behind the use of rectangular collimators for most common dental intraoral imaging procedures, and believes it would contribute to overall patient dose reduction in the long run, some additional challenges have arisen with regard to facilities being able to achieve compliance with the pending 2025 requirement.

CDPHE staff members performed a comprehensive search for all distributors and manufacturers of the universal add-on collimator devices and subsequently contacted each one to assess the availability of the devices. The distributors and manufacturers

have universally indicated that the add-on collimator devices envisioned by the current rule have been discontinued, are no longer being manufactured, and are not available for purchase on the open market. While some web sites continue to advertise the devices, the reality is that they are not available.

In an effort to expand the alternatives to help achieve compliance with the current collimator provision, dental x-ray positioning indicator device (PIDs) that incorporate a rectangular collimation component were considered and included in the department outreach to manufacturers and distributors. Unfortunately, all of these devices identified have also been discontinued and are no longer being manufactured. While there were limited quantities found to be available for purchase, there were less than 10 total confirmed to be available. Considering the roughly 8,000 machines in approximately 2,700 dental facilities that would require these devices for compliance, the availability is woefully inadequate to enable compliance by 2025.

A secondary consideration regarding the ability of facilities to comply with the rule relates to compliance with federal rules which apply to x-ray machine manufacturing and certification. Within the past year since initiating the current rulemaking effort, the radiation program reached out to our partners in the U.S. Food and Drug Administration (FDA). The FDA regulates the design aspects of radiation-emitting products including x-ray machines prior to distribution in the United States. Our discussions with FDA indicate that universal add-on rectangular collimator devices envisioned in the 2019-20 rulemaking would constitute a modification of the x-ray machine. This could additionally present additional cost burden on the regulated facilities in the form of service provider or qualified inspector fees associated with testing of the machines to confirm compliance with the federal standards.

The department continues to maintain the position that measures taken to reduce dose when reasonably achievable are desirable and consistent with the As Low As Reasonably Achievable (ALARA) concept in radiation protection. However, the current challenges to acquiring the equipment to achieve compliance cannot be ignored. The idea of rule of law should also be considered during the creation and maintenance of regulations and an important aspect of this concept is that a regulated community should be required to comply with regulations with which they can and will comply. Maintaining regulations that cannot and will not be complied with serves to erode the validity of the regulations and the communities respect for the regulatory program as a whole. As a public health agency, CDPHE intends to continue to strive for reductions in radiological dose to all Colorado residents and will encourage all strategies associated with dose reduction through continued education and guidance. As a regulatory body it would be detrimental to the overall program to retain requirements that would result in widespread noncompliance and as such we believe that it is necessary to remove the current rectangular collimator requirement at this time.

REFERENCES:

^a Dental Radiography: Doses and Film Speed, U.S. Food and Drug Administration (<https://www.fda.gov/radiation-emitting-products/nationwide-evaluation-x-ray-trends-next/dental-radiography-doses-and-film-speed>), accessed 10/25/2023)

^b 6 CCR 1007-1, Part 6, X-ray in the healing arts, [2019-20 Part 6 rulemaking package, Colorado Secretary of State, eDocket tracking # 2019-00555](#). Adopted 11/20/2019, effective 1/14/2020.

^c Radiation doses in dental radiology, The International Atomic Energy Agency, (<https://www.iaea.org/resources/rpop/health-professionals/dentistry/radiation-doses>, accessed 11/02/2023)

^d Doses in Our Daily Lives, U.S. Nuclear Regulatory Commission (<https://www.nrc.gov/about-nrc/radiation/around-us/doses-daily-lives.html>, accessed 11/02/2023)

Specific Statutory Authority.**Statutes that require or authorize rulemaking:**

25-1.5-101(1)(k), 25-1.5-101(1)(l), 25-11-103, 25-11-104, and 25-1-108, C.R.S.

Is this rulemaking due to a change in state statute?

_____ Yes, the bill number is _____. Rules are ____ authorized ____ required.

XX No

Does this rulemaking include proposed rule language that incorporate materials by reference?

XX Yes

XX URL

_____ No

Does this rulemaking include proposed rule language to create or modify fines or fees?

_____ Yes

XX No

Does the proposed rule language create (or increase) a state mandate on local government?

XX No.

- The proposed rule does not require a local government to perform or increase a specific activity for which the local government will not be reimbursed;
- The proposed rule requires a local government to perform or increase a specific activity because the local government has opted to perform an activity, or;
- The proposed rule reduces or eliminates a state mandate on local government.

_____ Yes.

This rule includes a new state mandate or increases the level of service required to comply with an existing state mandate, and local government will not be reimbursed for the costs associated with the new mandate or increase in service.

The state mandate is categorized as:

_____ Necessitated by federal law, state law, or a court order

_____ Caused by the State's participation in an optional federal program

_____ Imposed by the sole discretion of a Department

Has an elected official or other representatives of local governments disagreed with this categorization of the mandate? ____Yes XNo. If "yes," please explain why there is disagreement in the categorization.

Please elaborate as to why a rule that contains a state mandate on local government is necessary.

For consistency with the national framework for regulation of sources of radiation, all facilities regardless of ownership, must adhere to the same or equally protective public health and safety requirements and regulations for possession and use of radiation sources in Colorado. The proposed rule changes result in requirements that will equally

impact all types of persons who may possess, operate, or service radiation machines whether private, or governmentally owned or operated.

DRAFT REGULATORY ANALYSIS

6 CCR 1007-1, Part 02, Registration of radiation machines, facilities and services
6 CCR 1007-1, Part 06, X-ray imaging in the healing arts;

1. A description of the classes of persons affected by the proposed rule, including the classes that will bear the costs and the classes that will benefit from the proposed rule.

The persons affected by any given proposed change will depend, largely, on the type of x-ray machine in use or the type of facility, with the majority of changes impacting medical use facilities and/or certain operators.

Group of persons/entities affected by the Proposed Rule changes	Size of the Group	Relationship to the Proposed Rule Select category: C/CLG/S/B
Medical use facility registrants (excluding dental facilities)	Approximately 2,100	C
Registered Dental facilities	Approximately 2,700	C
Limited Scope Operators (LSOs) - registered	338	C
Limited Scope Operator (LSOs) - applicants	Approximately 25 applications received per month, some of which are cath lab personnel;	C
Provisional mammographers - currently registered ^e	55	C
Future Fluoroscopy operator - applicants	Approximately 2 applications per month or 24 per year	C
Other stakeholders who requested notification of proposed x-ray related radiation rule changes. This includes private organizations, professional societies and companies.	Approximately 700	S
Private companies that manufacture or sell/distribute rectangular collimator devices on the open market. This would include companies both inside and outside of Colorado.	Unknown	S

^e The provisional mammographer registration with the department is a short term registration that is limited to 1 year, with the option to extend by a one additional year. Typically, after 1-2 years, the individual will become nationally certified and registered with ARRT to become a fully qualified mammographer (ARRT(R)(M)) and the provisional mammography status is no longer needed.

While all are stakeholders, groups of persons/entities connect to the rule and the problem being solved by the rule in different ways. To better understand those different relationships, the following relationship categorization key is used:

C = individuals/entities that implement or apply the rule.
CLG = local governments that must implement the rule in order to remain in compliance with the law.

- S** = individuals/entities that do not implement or apply the rule but are interested in others applying the rule.
- B** = the individuals that are ultimately served, including the customers of our customers. These individuals may benefit, be harmed by or be at-risk because of the standard communicated in the rule or the manner in which the rule is implemented.

More than one category may be appropriate for some stakeholders.

2. To the extent practicable, a description of the probable quantitative and qualitative impact of the proposed rule, economic or otherwise, upon affected classes of persons.

Economic outcomes

Summarize the financial costs and benefits, include a description of costs that must be incurred, costs that may be incurred, any Department measures taken to reduce or eliminate these costs, any financial benefits.

Financial/economic costs:

C and CLG:

1. The registration of certain qualified fluoroscopy operators took effect in 2021, following the 2019-20 rule amendments to Part 2 and Part 6. Certain fluoroscopy operator applicants (physician assistants and advanced practice registered nurses) are addressed specifically under the current rule, while others are evaluated on a case-by-case basis. The proposed rule changes in 2.4.5.5, and Appendix 20 will incorporate nationally certified and registered cardiac catheterization lab personnel as fluoroscopy operators under current requirements rather than evaluate them on a case by case basis, reflecting the current practice in the field. This will require these individuals to submit a registration application with the specified \$60 application fee. As noted earlier, the department currently receives only 1-2 applications per month for fluoroscopy operator registration. With the proposed change, this number may increase.
2. Removing the current requirement for rectangular collimators could result in a financial/economic cost in terms of revenues lost by companies that manufacture and distribute the devices. Assuming that 4,000 rectangular collimators were purchased for roughly half of the 8,000 dental intraoral imaging machines in Colorado at a cost of \$150 per unit, it would result in net sales of around \$360k assuming a 40% markup. Net sales would be shared among numerous companies inside and outside of Colorado to varying extents. However, this may be moot since devices are not available on the open market.

There are no expected financial/economic costs for the remainder of the proposed changes to either Part 2 or Part 6, as changes consist of language clarifications and updates of current requirements and processes.

Financial/economic benefits:

Certain X-ray registrants are expected to have an economic/financial benefit where the elimination or easing of applicable requirements will require less resources. Eliminating the rectangular collimator provision in Part 6 is expected to result in a financial benefit (cost savings) for most dental facilities since they would no longer need to implement that requirement by January 1, 2025. Not purchasing collimators saves about \$150 per machine and about \$450 for the average facility with 3 machines. There are approximately 8,000 intraoral dental imaging machines in Colorado. If collimators were shared among machines and a total of only 4,000 collimators are purchased by facilities state-wide, the gross cost savings would be on the order of \$600k (\$150 per collimator x 4,000 machines).

There are no expected financial/economic benefits for the remainder of the proposed changes to either Part 2 or Part 6, as changes consist of language clarifications and updates of current requirements and are not a change to current processes.

Please describe any anticipated financial costs or benefits to these individuals/entities.

S: As a result of eliminating the rectangular collimator requirement, some organizations representing the dental community may want to develop and issue revised communications for their membership. This would likely involve minimal resources to be expended by any given organization.

B: While the majority of proposed changes do not directly impact the end recipient of services of registered x-ray facilities (such as patients at medical facilities), the elimination of the requirement for rectangular collimators could monetarily benefit the end user patient in a very small way. Without the requirement for dental intraoral collimators, patients who receive dental intraoral imaging services would not realize a cost increase for the purchase of the collimators by the facility which are passed on to the patient. However, due to the low cost of the collimators (as outlined earlier) the cost on a per patient basis would expect to be miniscule.

Non-economic outcomes

Summarize the anticipated favorable and non-favorable non-economic outcomes (short-term and long-term), and, if known, the likelihood of the outcomes for each affected class of persons by the relationship category.

C/CLG: The overall anticipated favorable outcome for the proposed changes to the Part 2 and Part 6 rules, will be improved clarity and understanding of the regulations and requirements by the regulated community and radiation program staff. The incorporation of nationally registered and certified cardiac cath lab personnel as registered fluoroscopy operators is expected to be a benefit to facilities and applicants for registration since current rules do not recognize these individuals as fluoroscopy operators. Since many of these individuals are already working in cardiac cath labs, this will allow a clearer pathway to compliance.

B:

1. A possible favorable outcome with the elimination of the rectangular collimator requirement for entities that represent the dental community, will be that they would not necessarily need to spend additional time helping their clients find ways to achieve compliance.

S:

1. Elimination of the rectangular collimator requirement, is a non-favorable outcome that will result in no additional dose savings for patients who receive imaging from intraoral dental systems.
2. The incorporation of RCIS individuals to the current fluoroscopy registration process is a favorable outcome expected to benefit the end user patient who undergoes cardiac cath lab procedures. The proposed rule language helps ensure that individuals operating fluoroscopy machines have sufficient training and certifications necessary for safe operation during patient exams.
3. The remaining proposed changes are primarily technical and clarification changes and not expected to have any direct or indirect impact or outcomes for the end user.

3. The probable costs to the agency and to any other agency of the implementation and enforcement of the proposed rule and any anticipated effect on state revenues.

A. Anticipated CDPHE personal services, operating costs or other expenditures:

There may be some minor additional personal services expended as a result of an increase in fluoroscopy operator applications, beyond those currently received. As noted earlier, the radiation program typically receives about 2 fluoroscopy operator applications per month on average. Even with an increase in numbers of fluoroscopy registration applications received, it is expected they can be absorbed into current resources and funding levels.

Anticipated CDPHE Revenues:

With regard to the proposed provision to incorporate cath lab personnel into the current fluoroscopy operator registration process, there may be some negligible amount of additional revenue due to an increase in fluoroscopy operator registration applications. The number of applicants is not easily predictable, however, but assuming the number of applications received doubles from the current 2 per month to 4 per month would result in an additional \$120 per month (\$1,440 per year) of revenue.

All other proposed changes to Part 2 and Part 6 are not expected to impact CDPHE revenues.

B. Anticipated personal services, operating costs or other expenditures by another state agency: Not Applicable

Anticipated Revenues for another state agency: Not Applicable

4. A comparison of the probable costs and benefits of the proposed rule to the probable costs and benefits of inaction.

Along with the costs and benefits discussed above, the proposed revisions:

- ☒ Comply with a statutory mandate to promulgate rules.
- ☒ Comply with federal or state statutory mandates, federal or state regulations, and Department funding obligations.
- ☒ Maintain alignment with other states or national standards.
- ☒ Implement a Regulatory Efficiency Review (rule review) result
- ☒ Improve public and environmental health practice.
- ☒ Implement stakeholder feedback.

Advance the following CDPHE Strategic Plan priorities (select all that apply):

1. Reduce Greenhouse Gas (GHG) emissions economy-wide from 125.716 million metric tons of CO ₂ e (carbon dioxide equivalent) per year to 119.430 million metric tons of CO ₂ e per year by June 30, 2020 and to 113.144 million metric tons of CO ₂ e by June 30, 2023.
<input type="checkbox"/> Contributes to the blueprint for pollution reduction <input type="checkbox"/> Reduces carbon dioxide from transportation <input type="checkbox"/> Reduces methane emissions from oil and gas industry <input type="checkbox"/> Reduces carbon dioxide emissions from electricity sector
2. Reduce ozone from 83 parts per billion (ppb) to 80 ppb by June 30, 2020 and 75 ppb by June 30, 2023.
<input type="checkbox"/> Reduces volatile organic compounds (VOC) and oxides of nitrogen (NO _x) from the oil and gas industry. <input type="checkbox"/> Supports local agencies and COGCC in oil and gas regulations. <input type="checkbox"/> Reduces VOC and NO _x emissions from non-oil and gas contributors
3. Decrease the number of Colorado adults who have obesity by 2,838 by June 30, 2020 and by 12,207 by June 30, 2023.
<input type="checkbox"/> Increases the consumption of healthy food and beverages through education, policy, practice and environmental changes. <input type="checkbox"/> Increases physical activity by promoting local and state policies to improve active transportation and access to recreation. <input type="checkbox"/> Increases the reach of the National Diabetes Prevention Program and Diabetes Self-Management Education and Support by collaborating with the Department of Health Care Policy and Financing.
4. Decrease the number of Colorado children (age 2-4 years) who participate in the WIC Program and have obesity from 2120 to 2115 by June 30, 2020 and to 2100 by June 30, 2023.
<input type="checkbox"/> Ensures access to breastfeeding-friendly environments.
5. Reverse the downward trend and increase the percent of kindergartners protected against measles, mumps and rubella (MMR) from 87.4% to 90% (1,669 more kids) by June 30, 2020 and increase to 95% by June 30, 2023.
<input type="checkbox"/> Reverses the downward trend and increase the percent of kindergartners protected against measles, mumps and rubella (MMR) from 87.4% to 90% (1,669 more kids) by June 30, 2020 and increase to 95% by June 30, 2023. <input type="checkbox"/> Performs targeted programming to increase immunization rates. <input type="checkbox"/> Supports legislation and policies that promote complete immunization and exemption data in the Colorado Immunization Information System (CIIS).
6. Colorado will reduce the suicide death rate by 5% by June 30, 2020 and 15% by June 30, 2023.
<input type="checkbox"/> Creates a roadmap to address suicide in Colorado. <input type="checkbox"/> Improves youth connections to school, positive peers and caring adults, and promotes healthy behaviors and positive school climate. <input type="checkbox"/> Decreases stigma associated with mental health and suicide, and increases help-seeking behaviors among working-age males, particularly within high-risk industries. <input type="checkbox"/> Saves health care costs by reducing reliance on emergency departments and

connects to responsive community-based resources.	
7.	<p>The Office of Emergency Preparedness and Response (OEPR) will identify 100% of jurisdictional gaps to inform the required work of the Operational Readiness Review by June 30, 2020.</p> <ul style="list-style-type: none"> ___ Conducts a gap assessment. ___ Updates existing plans to address identified gaps. ___ Develops and conducts various exercises to close gaps.
8.	<p>For each identified threat, increase the competency rating from 0% to 54% for outbreak/incident investigation steps by June 30, 2020 and increase to 92% competency rating by June 30, 2023.</p> <ul style="list-style-type: none"> ___ Uses an assessment tool to measure competency for CDPHE's response to an outbreak or environmental incident. ___ Works cross-departmentally to update and draft plans to address identified gaps noted in the assessment. ___ Conducts exercises to measure and increase performance related to identified gaps in the outbreak or incident response plan.
9.	<p>100% of new technology applications will be virtually available to customers, anytime and anywhere, by June 20, 2020 and 90 of the existing applications by June 30, 2023.</p> <ul style="list-style-type: none"> ___ Implements the CDPHE Digital Transformation Plan. ___ Optimizes processes prior to digitizing them. ___ Improves data dissemination and interoperability methods and timeliness.
10.	<p>Reduce CDPHE's Scope 1 & 2 Greenhouse Gas emissions (GHG) from 6,561 metric tons (in FY2015) to 5,249 metric tons (20% reduction) by June 30, 2020 and 4,593 tons (30% reduction) by June 30, 2023.</p> <ul style="list-style-type: none"> ___ Reduces emissions from employee commuting ___ Reduces emissions from CDPHE operations
11.	<p>Fully implement the roadmap to create and pilot using a budget equity assessment by June 30, 2020 and increase the percent of selected budgets using the equity assessment from 0% to 50% by June 30, 2023.</p> <ul style="list-style-type: none"> ___ Used a budget equity assessment ___ Advance CDPHE Division-level strategic priorities.

The costs and benefits of the proposed rule will not be incurred if inaction was chosen. Costs and benefits of inaction not previously discussed include:

The cost of inaction for most of the proposed changes will result in Colorado regulations being less clear and understandable. Most of the proposed changes involve revising, rewording or rearranging existing requirements.

With regard to the proposed elimination of the rectangular collimator provision in 6.7.2.3(3)(b), the cost of inaction (e.g., retaining the requirement with the current effective date of January 1, 2025) will likely be that a vast majority of regulated entities will be in a state of non-compliance due to unavailability of devices to purchase on the open market.

With regard to the incorporation of cath lab specialists into the fluoroscopy registration process (2.4.5.5, Appendix 20, and 6.3.1.6), inaction on these changes will result in cath lab specialists continuing to be out of compliance with the current regulations. RCIS individuals are not currently recognized or addressed by the current rule as operators of fluoroscopy systems.

5. A determination of whether there are less costly methods or less intrusive methods for achieving the purpose of the proposed rule.

Rulemaking is proposed when it is the least costly method or the only statutorily allowable method for achieving the purpose of the statute. The specific revisions proposed in this rulemaking were developed by radiation program staff and with consideration of feedback from stakeholders and in consideration of the feasibility and likelihood of achieving full compliance. The benefits, risks and costs of these proposed revisions were compared to the costs and benefits of other options. The proposed revisions provide the most benefit for the least amount of cost, are the minimum necessary or are the most feasible manner to achieve compliance.

6. Alternative Rules or Alternatives to Rulemaking Considered and Why Rejected.

No alternative rules or alternative rulemaking was considered for the majority of the proposed rule changes which are primarily based on the need for additional clarity and understanding in the rule as expressed by stakeholders (and staff), and the need to incorporate certain qualified fluoroscopy operators who are not currently addressed by the regulations.

Following our stakeholder process, and with regard to the proposal to rescind the rectangular collimator requirement for dental intraoral imaging systems in Part 6, several alternative approaches were considered and evaluated.

- One alternative considered was to retain the current rectangular collimator requirement and due date of January 1, 2025 without revision.
 - As discussed earlier and following stakeholder feedback from the 2022 dental facility survey, collimator device availability on the open market is a significant concern. Recently, Division staff performed a search for all distributors and manufacturers of the universal add-on collimator devices or similar shielding devices and subsequently contacted each one to assess the availability of the devices. The distributors and manufacturers have universally indicated that the add-on collimator devices envisioned by the current rule have been discontinued, are no longer being manufactured, and are not available for purchase on the open market. While some web sites continue to advertise the devices, the reality is that they are not available.
- Another alternative considered was to revise the current requirement to extend the due date beyond the current January 1, 2025 date to allow for additional implementation time and market availability of universal add-on collimator devices or other devices that meet the intent and purpose of these collimators.
 - This alternative was rejected primarily due to a lack of market availability of add-on collimator devices. While some regulations may drive market availability, in this instance, that does not appear to be happening. Open market availability of certain equipment or devices required by regulation is

something not under the direction or control of the Division.

- At the suggestion of a stakeholder, the Division also considered modifying the existing rule language to require that all new intraoral dental imaging systems installed after at a future date (to be determined), would be required to have rectangular collimators inherent as part of the tube assembly design.
 - This alternative was rejected since it was felt that there would be insufficient time to research this alternative and gain additional stakeholder feedback under the current rulemaking schedule. The Division would need more time to assess the market availability of this type of system and the associated economic impacts of such a requirement. An additional confounding issue involves implementation concerns expressed by stakeholders where certain imaging studies need a wider field of view. Systems with fixed rectangular collimators would not allow the flexibility of the originally envisioned universal add-on type collimators. This could potentially limit the care provided by a given dental facility with only one machine.

7. To the extent practicable, a quantification of the data used in the analysis; the analysis must take into account both short-term and long-term consequences.

As outlined earlier, the data gathered during the 2022 dental facility survey indicated that a high percentage (over 90%) of dental facilities have not yet implemented the use of rectangular collimators at their facilities, since being added to rule in 2020. This is in spite of department and stakeholder organization efforts to communicate the pending requirement.

STAKEHOLDER ENGAGEMENT

for Amendments to

6 CCR 1007-1, Part 02, Registration of radiation machines, facilities and services
6 CCR 1007-1, Part 06, X-ray imaging in the healing arts

State law requires agencies to establish a representative group of participants when considering to adopt or modify new and existing rules. This is commonly referred to as a stakeholder group.

Early Stakeholder Engagement:

The following individuals and/or entities were invited to provide input in the development of these proposed rules:

Organization	Representative Name and Title (if known)
Approximately 5,259 x-ray registrants in Colorado representing: <ul style="list-style-type: none"> Facilities that use x-ray devices for medical purposes; Facilities that use x-ray devices for non-medical purposes; Registered service companies; Registered Qualified Inspectors and Qualified Experts. 	NA
Approximately 1,404 stakeholders with an interest in changes to rules and regulations pertaining to radiation control, including private individuals and companies, professional medical societies, associations and related organizations.	NA

In early September, stakeholders in the above identified categories or groups were notified by email of the opportunity to comment on the proposed draft rules that were posted on the department website. In addition to the initial notification, a follow-up email notice was sent reminding stakeholders of the opportunity to participate in two virtual stakeholder meetings that were held in early October 2023 and prior to the conclusion of the comment period. A total of 6 individuals attended the two stakeholder meetings. During the stakeholder process, the department received written comments from two stakeholders. The summary of those comments are discussed in further detail below.

Stakeholder Group Notification

The stakeholder group was provided notice of the rulemaking hearing and provided a copy of the proposed rules or the internet location where the rules may be viewed. Notice was provided prior to the date the notice of rulemaking was published in the Colorado Register (typically, the 10th of the month following the Request for Rulemaking).

☒ Not applicable. This is a Request for Rulemaking Packet. Notification will occur if the Board of Health sets this matter for rulemaking.

☐ Yes.

Summarize Major Factual and Policy Issues Encountered and the Stakeholder Feedback Received. If there is a lack of consensus regarding the proposed rule, please also identify the Department's efforts to address stakeholder feedback or why the Department was unable to accommodate the request.

During the comment period, there were two opposing comments provided by stakeholders. Both comments are related to the proposed elimination of the dental collimator provision in 6.7.2.3(3)(b), which is set to become effective in approximately 14 months (January 1, 2025) as identified in current rule.

Comment supporting elimination of the rectangular collimator provision

One stakeholder was in support of removing the requirement for rectangular collimators for the reasons given (in the draft rule and associated documents), but also because they believe it could lead to greater exposure to radiation due to difficulty of assistants to align the tube-head to avoid cone-cuts even with existing positioners. The commenter noted that there are other devices to help mitigate this (cone-cuts), but stated that they are costly and cumbersome. With high turnover rates in dental offices the commenter noted it would lead to a significant burden to train and motivate employees to avoid retakes.

Comment opposed to elimination of the rectangular collimator provision

One stakeholder stated their opposition to removing the proposed requirement for rectangular collimators for routine intra-oral imaging. In their comments, the stakeholder noted that the benefits of rectangular collimation for routine intraoral imaging are well established, stating that in no other application of x-rays for imaging do the regulations allow the gross misalignment of x-ray field to image receptor size. The commenter felt that the public will not be protected by the voluntary adoption of these requirements and that regulatory action is necessary. The commenter noted that in addition to the organizations identified by the department (in the 2019-20 rule package) that support rectangular collimator use, the American Academy of Oral and Maxillofacial Radiology also concurs with their use. The commenter felt that the department is acting against the recommendations of these professional associations.

The commenter opposed to eliminating the rectangular collimators provided a rebuttal to several of the statements in the informational notes in the draft rule and associated documents on the following topical areas:

- Facilities identified concerns over possible imaging errors when using rectangular collimators.

As the commenter pointed out, this topic was discussed and evaluated during the original 2019-20 rulemaking initially implementing the collimator requirement. The more recent 2022 survey of dental facilities indicates there is continued concern with this subject. Based upon the available literature, we agree that this concern may be somewhat exaggerated and that stakeholders have perhaps not fully evaluated it or reviewed technical documents, it remains a concern of stakeholders.

- The need for additional staff training and that 5 years (between the rule effective date and rectangular collimator requirement effective date) is sufficient.

We do not disagree with this observation.

- Equipment availability based on internet searches

As discussed earlier, the Division contacted multiple manufacturers and distributors of rectangular collimators. Our evaluation indicated that while some websites continue to advertise availability of the items, direct contact with these vendors indicated no current availability.

The commenter also made the following specific recommendations:

- Require that all newly installed machines after a specified date be (inherently) capable of rectangular collimation.

This option presents several challenges for the Division without further market and impact evaluations and additional stakeholder outreach and feedback considerations. Although the demand for x-ray systems with inherent rectangular collimation would likely be less, since purchases are spread out over time (as a dental facility would determine the need for new machine purchases), market availability must still be considered. The potential cost differences between rectangular vs round collimator machines systems must be evaluated further. Establishing such a machine based rectangular collimator requirement would potentially prohibit wider imaging fields and needs additional consideration.

- Maintain the 2025 deadline for rectangular collimation, but grant an automatic enforcement waiver until the next required QI evaluation, thus spreading out the purchasing wave.

Market availability for universal add-on collimation devices has not been driven by the current regulatory requirement, so (implicitly) extending this date by issuance of waivers would also not be expected to drive manufacturing and distribution. Additionally, establishing plans for an “automatic waiver” is not deemed to be a good practice from a regulatory perspective and is unlikely to drive compliance. Additionally, it’s unclear whether an evaluation performed by Qualified Inspectors (regardless of when it occurs) would meet the FDA requirements. It is our understanding that devices which alter the x-ray beam are required be certified components which typically must go through a manufacturer certification process with FDA. Despite requests from the division, both FDA and a manufacturer of a shielded x-ray Position Indicating Device (PID), have not provided information to clarify if this type of device must be a certified component. Without additional information, it is our interpretation that devices that alter the x-ray beam must be certified components.

Please identify the determinants of health or other health equity and environmental justice considerations, values or outcomes related to this rulemaking: None.

Overall, after considering the benefits, risks and costs, the proposed rule (select all that apply):

	Improves behavioral health and mental health; or, reduces substance abuse or suicide risk.	Reduces or eliminates health care costs, improves access to health care or the system of care; stabilizes individual participation; or, improves the quality of care for unserved or underserved populations.
--	--------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

	Improves housing, land use, neighborhoods, local infrastructure, community services, built environment, safe physical spaces or transportation.	X	Reduces occupational hazards; improves an individual's ability to secure or maintain employment; or, increases stability in an employer's workforce.
	Improves access to food and healthy food options.	X	Reduces exposure to toxins, pollutants, contaminants or hazardous substances; or ensures the safe application of radioactive material or chemicals.
	Improves access to public and environmental health information; improves the readability of the rule; or, increases the shared understanding of roles and responsibilities, or what occurs under a rule.		Supports community partnerships; community planning efforts; community needs for data to inform decisions; community needs to evaluate the effectiveness of its efforts and outcomes.
	Increases a child's ability to participate in early education and educational opportunities through prevention efforts that increase protective factors and decrease risk factors, or stabilizes individual participation in the opportunity.		Considers the value of different lived experiences and the increased opportunity to be effective when services are culturally responsive.
	Monitors, diagnoses and investigates health problems, and health or environmental hazards in the community.		Ensures a competent public and environmental health workforce or health care workforce.
	Other: Ensures consistency with federal rule and the national framework for regulation of radioactive materials.		Other: _____ _____

DRAFT 1 11/30/2023

DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Hazardous Materials and Waste Management Division

State Board of Health

RADIATION CONTROL - REGISTRATION OF RADIATION MACHINES, FACILITIES AND SERVICES

6 CCR 1007-1 Part 02

[Editor's Notes follow the text of the rules at the end of this CCR Document.]

Adopted by the Board of Health June 16, 2024 February 21, 2024, effective date August 14, 2024 April 14, 2024

PART 2: REGISTRATION OF RADIATION MACHINES, FACILITIES AND SERVICES

2.1 Purpose and Scope.

* * *

[* * * indicates unaffected sections of the rule]

2.1.5 Published Material Incorporated by Reference.

2.1.5.1 Throughout this Part 2, federal regulations, state regulations, and standards or guidelines of outside organizations have been adopted and incorporated by reference. Unless a prior version of the incorporated material is otherwise specifically indicated, the materials incorporated by reference cited herein include only those versions that were in effect as of the most recent effective date of this Part 2 (~~October, 2020~~ **April, 2024**), and not later amendments or editions of the incorporated material.

2.1.5.2 Materials incorporated by reference are available for public inspection, and copies (including certified copies) can be obtained at reasonable cost, during normal business hours from the Colorado Department of Public Health and Environment, Hazardous Materials and Waste Management Division, 4300 Cherry Creek Drive South, Denver, Colorado 80246. Additionally, <https://www.colorado.gov/cdphe/radregs> identifies where the incorporated federal and state regulations are available to the public on the internet at no cost. A copy of the materials incorporated in this Part is available for public inspection at the state publications depository and distribution center.

2.1.5.3 Availability from Source Agencies or Organizations.

- (1) All federal agency regulations incorporated by reference herein are available at no cost in the online edition of the Code of Federal Regulations (CFR) hosted by the U.S. Government Printing Office, online at www.govinfo.gov <https://www.govinfo.gov/app/collection/cfr/>.

Commented [JSJ1]: Editorial note 1: All comments (such as this one) shown in the right side margin of this draft document are for information purposes only to assist the reader in understanding the proposed rule change during the review and comment process. These side margin notes are not part of the rule and all comments will be deleted prior to publication of the final rule by the Colorado Secretary of State.

Editorial note 2: Alignment and formatting corrections and minor typographical adjustments may be made in the rule and may not be specifically identified with a side margin comment.

Editorial note 3: Colorado's radiation regulations are to be consistent with the current model rules of the Conference of Radiation Control Program Director's (CRCPD), Inc. except where the Board of Health determines a deviation is necessary.

Editorial note 4: This draft is not a complete rule. Unaffected/unchanged sections or provisions have been removed from the rule and are not shown in this draft. Unaffected sections/provisions are denoted with a " * * *" and remain as-is in the current rule with no changes. Some provisions may be shown with no changes and are provided for reference purposes.

Commented [JSJ2]: The stated adoption and effective dates are tentative and subject to change, pending the Board of Health meeting schedule, preliminary acceptance by the Board, final adoption by the Board, and the Colorado Register publication dates.

The anticipated dates are based on the annual rulemaking hearing schedule (regulatory agenda) for the Department which may be found [online](#).

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- (2) All state regulations incorporated by reference herein are available at no cost in the online edition of the Code of Colorado Regulations (CCR) hosted by the Colorado Secretary of State's Office, online at <https://www.sos.state.co.us/CCR/RegisterHome.do> <https://www.sos.state.co.us/CCR/NumericalDeptList.do#1000>.
- (3) Copies of the standards or guidelines of outside organizations are available at no cost or for purchase from the source organizations listed below.
- (a) American Registry of Radiologic Technologists
 1255 Northland Drive
 St. Paul, MN 55120-1155
 Phone (651) 687-0048
[arrt.orghttps://www.arrt.org/](https://www.arrt.org/)

2.2 Definitions.

2.2.1 Definitions of general applicability to these regulations are in Part 1, section 1.2.

2.2.2 As used in Part 2, each term below has the definition set forth.

"ARRT" means the American Registry of Radiologic Technologists, 1255 Northland Drive, St. Paul, MN 55120, Phone (651) 687-0048, web site: <https://www.arrt.org/>.

"ASRT" means the American Society of Radiologic Technologists.

* * *

"Direct supervision" means the supervisor is present in the facility and immediately available to furnish assistance and direction to the supervisee throughout the performance of a procedure.

- (1) The direct supervisor is not required to be present in the room when the procedure is performed.

~~(2) Direct supervision during the performance of a mammography examination means that the supervisor is present to observe and correct, as needed, the performance of the individual being supervised who is performing the examination.~~

* * *

~~"Personal supervision" is as defined in Part 1 of the regulations.~~

~~"Provisional Mammographer" means an individual who is in-training to become a Qualified mammographer and meets the requirements of Appendix 2M.2M.2 and has current department approval to perform mammograms under direct supervision in order to meet the requirements to become a Qualified Mammographer.~~

* * *

"Qualified mammographer" means a mammographer who meets the applicable requirements of ~~Appendix 2M.2.4.5.4(1) and 2.4.5.4(2).~~

"Qualified trainer" (QT) means an individual whose training and experience adequately prepares the individual to carry out specified training assignments as illustrated in Appendix 2J.

Commented [JSJ3]:

This mammography specific language is deleted due to being addressed and clarified in the proposed changes to Appendix 2M (2M.3).

Commented [JSJ4]:

Definition is added for clarity since the definition is used in Part 2 in several instances.

Commented [JSJ5]:

This definition is updated, consistent with proposed changes to Section 2.4.5.4 and Appendix 2M. The type/level of supervision - direct versus personal - will vary during the training process for provisional mammographers and is outlined in Appendix 2M, 2M.3..

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79 "Radiology Practitioner Assistant" means an individual who is currently registered as RPA by the
 80 Certification Board for Radiology Practitioner Assistants and are designated RPA (CBRPA).

81 "Radiographic Examination" means performing a procedure, including selection of exposure
 82 settings, positioning the x-ray system and the patient, and initiating and terminating the exposure.

83 "~~Radiologic technologist~~" means an individual who is currently registered in radiologic technology
 84 with the ~~American Registry of Radiologic Technologists~~ **ARRT**. See "R.T.(CT)(**ARRT**)",
 85 "R.T.(**R**)(M)(**ARRT**)", "R.T.(N)(**ARRT**)", "R.T.(R)(**ARRT**)", and "R.T.(T)(**ARRT**)".

86 "Registered Radiologist Assistant" means an individual who is certified by the ARRT as a
 87 Registered Radiologist Assistant designated as R.R.A.-(**ARRT**).

88 "Registered medical physicist" (RMP) means an individual who meets the applicable
 89 requirements of Appendix 2I and has current Department approval to perform medical physics
 90 activities, including shielding design, performing radiation surveys, and providing consultation for
 91 radiation protection and quality assurance and clinical medical physics for radiation therapy,
 92 computed tomography, mammography and/or other healing arts facilities.

93 "~~R.T.(CT)(**ARRT**)~~" means an individual who is certified and registered by the ARRT ~~in with a~~
 94 ~~specialty post-secondary certification in~~ computed tomography. (Note: Since CT
 95 certification is a post-secondary registration and has several primary paths, the "(R)" is
 96 not included as it may vary between individuals depending on their primary certification.)

97 "R.T.(**R**)(M)(**ARRT**)" means an individual who is certified and registered by the ARRT in
 98 radiography with a specialty certification in mammography.

99 "R.T.(N)(**ARRT**)" means an individual who is certified and registered by the ARRT in nuclear
 100 medicine technology.

101 "R.T.(R)(**ARRT**)" means an individual who is certified and registered by the ARRT in radiography.

102 "R.T.(T)(**ARRT**)" means an individual who is certified and registered by the ARRT in radiation
 103 therapy.

104 * * *

106 2.3.2 Radiation machines ~~while~~ in transit or in storage incident ~~theretoto transit~~ are exempt from the
 107 requirements of Part 2.

108 * * *

110 **REQUIREMENTS FOR DEPARTMENT APPROVAL AND/OR REGISTRATION**

111 **2.4 State of Colorado Authorization or Approval Recognized by the Department is Required**
 112 **for Each Category Designated in This Section.**

113 2.4.1 Registration of a Facility.

114 2.4.1.1 Each person possessing or in the process of coming into the possession of a radiation
 115 machine facility shall:

- 116 (1) Be registered with the Department prior to using a radiation producing machine
 117 at the facility;

Commented [JSJ6]:

This and associated definitions (found below) are updated for consistency with the designations used and recommended by the American Registry of Radiologic Technologists for registered individuals.

Commented [JSJ7]:

This and associated and subsequent related definitions are updated for consistency with the designations used and recommended by the ARRT for registered individuals.

Certain registrations issued by ARRT are considered "primary" registrations and others are post-secondary registrations. Primary registrations are a path to obtain a post-secondary registration. Primary registrations include those in radiography, nuclear medicine technology, and radiation therapy. Mammography is post-secondary registration that first requires certification in radiography and is why the "(R)" designation is included. Computed Tomography (CT) registration is a post-secondary registration, and there are several primary paths to receive certification.

Commented [JSJ8]:

Language is revised for clarity and consistency with the CRCPD model rule Part B.

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- (2) Before the facility registration expiration date, **at least every twelve (12) months**, submit a complete application for registration on the applicable Department R-4 series Form, and include all of the information required by the form and any accompanying instructions. The facility shall:
- (a) Designate a radiation safety officer who meets the applicable requirements of Appendix 2A to be responsible for overall radiation protection for the facility; and
 - (b) Document that a written shielding design has been:
 - (i) Completed in accordance with Parts 6, 8, or 9 of these regulations, as applicable, prior to any radiation machine installation; and
 - (ii) Retained on file at the facility for the life of the facility.
 - (c) Pay the radiation machine facility registration fee for radiation control services indicated by Part 12, Category 26. The radiation machine facility registration fee is not required for registration updates required by 2.4.6.5 unless the update is submitted less than thirty (30) days prior to the registrant's expiration date.

2.4.1.2 As prescribed by 6.3.3.4 for a healing arts screening program, registrants shall complete and submit a Healing Arts Screening application including all of the information required by Part 6, Appendix 6F.

2.4.1.3 In addition to the other requirements of 2.4, any research using radiation machines on **living** humans shall be approved by an Institutional Review Board (IRB).

* * *

2.4.5 Registration of specific radiation machine operators.

Except as otherwise specified in these regulations, registration with the Department is not required for an individual who holds a current, valid national registry in radiography, nuclear medicine technology, radiation therapy, computed tomography or mammography as issued by the ARRT or NMTCB (with specialty certification in Computed Tomography) or other nationally recognized registry specifically accepted by the Department. Additional requirements may be applicable in accordance with Appendix 2E, Appendix 2G, Appendix 2M, or Appendix 2O. All other non-physician individuals operating x-ray imaging systems on living humans who are not nationally registered or certified by ARRT or NMTCB must meet the requirements specified in the regulations and shall register with the Department, when applicable.

* * *

2.4.5.4 Provisional Mammographer.

- (1) ~~Any individual performing mammography exams under supervision in order to meet the initial requirements of 2M.1.3 shall be registered as a Provisional Mammographer prior to performing such exams.~~
- (2) ~~The application to be registered in the State of Colorado as a Provisional Mammographer shall be submitted on the Form R-64 series application and shall~~

Commented [JSJ9]:

Clarifying language is added to help ensure registrants understand that facility registrations are required to be renewed annually. The annual facility registration process helps keep information up to date in the department registration database.

There is no change to the frequency of the registration which coincides with the annual fee payment as specified in [Part 12](#).

Commented [JSJ10]:

The word "living" is added to clarify that the use of non-living humans (i.e., cadavers) would not require IRB approval.

Commented [JSJ11]:

This section is revised in its entirety as shown/discussed below.

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contain all information required by the Department as indicated on the form(s) and all accompanying instructions.

(3) Provisional mammographer registration is issued for a period of one year.

(4) A Provisional Mammographer registration may be renewed once.

2.4.5.4 Mammographer

Any individual performing mammography shall:

(1) Be certified by the ARRT in Mammography (R.T.(R)(M)(ARRT)); and

(2) Meet the qualifications of and maintain the education and experience requirements for MQSA under 21 CFR Part 900.12(a)(2);

Or

(3) Register as a provisional mammographer, meet the requirements of Appendix 2M, and be considered to be in-training until the requirements of 2.4.5.4(1) and 2.4.5.4(2) are met.

2.4.5.5 Fluoroscopy operator

(1) On or after January 1, 2021, each individual operating a fluoroscopy imaging system on living humans shall be registered with the department as a fluoroscopy operator consistent with 2.4.5.5(2) or 2.4.5.5(3), except for:

(a) A physician who has an active license from the applicable State of Colorado licensure board consistent with the requirements of Section 2.6.1.2; or

(b) A Registered Radiologist Assistant or Radiology Practitioner Assistant (RPA) who meets the requirements of Appendix 2G; or

(c) An individual with a current R.T.(R), R.T.(CV), R.T.(CI), R.T.(VI), or R.T.(T) registration.

(2) Individuals whose training and experience has been evaluated by the department in writing prior to the effective date of the rule January 1, 2021, as having met the training and experience requirements of Appendix 2O:

(a) Need not complete the training or testing requirements of Appendix 2O.1; and

(b) Shall be required to obtain and maintain registration in accordance with 2.4.5.5(3)(b) through 2.4.5.5(3)(f) on or after January 1, 2021.

(3) Registration

(a) In order to apply for registration as a fluoroscopy operator, the applicant for fluoroscopy operator registration must complete the requirements of Appendix 2O in a structured and documented training program that meets the requirements of ARRT or another program as authorized by the regulations or as approved in writing by the department.

Commented [JSJ12]:

Section 2.4.5.4 is revised in conjunction with Appendix 2M for clarity and understanding and to reflect the current requirements and processes for qualified mammographers and those in-training as provisional mammographers.

Under the revised language, individuals are considered to be qualified mammographers and can perform exams unsupervised if they meet the requirements of 2.4.5.4(1) and 2.4.5.4(2). This is consistent with current requirements.

If individuals performing mammography do not currently have mammography certification (they do not meet 2.4.5.4(1)), and desire to become qualified mammographers, they will need to meet 2.4.5.4(3) and register as a provisional mammographer while in training in accordance with the requirements of Appendix 2M.

Commented [JSJ13]: Language is added to clarify that in this provision the registration is with the department rather than an outside certifying body.

Commented [JSJ14]:

Secondary certifications are added for clarity, and include Cardiovascular-Interventional Radiography (CV), Cardiac Interventional Radiography (CI) and Vascular Interventional Radiography (VI).

Commented [JSJ15]:

The proposed change removes the more generic language "the effective date of the rule" and replaces it with the specific date that the provision was initially introduced into the rule (as listed in (2)(b)). The provision was added to allow grandfathering of individuals to continue their use of fluoroscopy. Prior to the January 1, 2021 rule, individuals were evaluated on a case by case basis.

Commented [JSJ16]:

Language is added to conform to proposed changes in Appendix 2O, which will incorporate the registration process for certain qualified and nationally registered cardiac catheterization lab professionals who are currently being evaluated on a case by case basis.

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- 201 (b) Each fluoroscopy operator shall complete an R-50 series application
 202 form with all of the information required, together with the fee required by
 203 Part 12, Category 24.
- 204 (i) The Form R-50 series application form shall be used to confirm
 205 the completion of the requirements of Appendix 2O.
- 206 (c) Except for those individuals meeting the requirements of 2.4.5.5(2),
 207 application for registration as a fluoroscopy operator shall be made within
 208 one year ~~upon~~**following** completion of the training requirements of
 209 Appendix 2O.
- 210 (d) If an applicant cannot achieve a passing score **on the applicable**
 211 **national registration exam** per Appendix 2O, **section 20.1.3.1 or**
 212 **20.1.3.2** within three attempts, the applicant must restart the training
 213 required by Appendix 2O.
- 214 (e) ~~Issuance of a~~ fluoroscopy operator registration is valid for a two year
 215 period.
- 216 (f) Registrants must meet the requirements of 2O.2 in order to renew the
 217 fluoroscopy operator registration.
- 218 (i) The Form R-50 series application form shall be used to renew
 219 the fluoroscopy operator registration every two years.
- 220 (g) Reciprocal recognition of a registration or license specifically authorizing
 221 fluoroscopy use and granted by another state **or organization** shall be
 222 submitted to the Department for review and evaluation on an individual
 223 case-by-case basis.
- 224 (h) **Department registered fluoroscopy operators shall operate**
 225 **machines within their respective scope of practice, training, and**
 226 **experience.**
- 227 2.4.6 General Requirements Applicable to Issuance and Maintenance of Department Registrations.
- 228 2.4.6.1 The application to be registered in the State of Colorado shall be submitted on the
 229 appropriate Department form(s) and shall contain all information required by the
 230 Department as indicated on the form(s) and all accompanying instructions.
- 231 2.4.6.2 Upon a determination that an applicant meets the requirements of the regulations, the
 232 Department shall issue a Notice of Registration.
- 233 2.4.6.3 The Department may incorporate in the Notice of Registration at the time of issuance, or
 234 thereafter by appropriate rule, regulation, or order, such additional requirements and
 235 conditions with respect to the registrant's activities as the Department deems appropriate
 236 or necessary.
- 237 2.4.6.4 Approval to conduct or perform activities in accordance with the registration requirements
 238 of these regulations shall be:
- 239 (1) For a period of two (2) years, except as otherwise specified by these regulations
 240 or the Department; and

Commented [JSJ17]:

The language of this provision is revised to reflect the revised scope of Appendix 2O.

Commented [JSJ18]:

Revised for clarity.

Commented [JSJ19]: The addition of "or organization" will allow review of unforeseen registrations or licensing on a case by case basis. One example may be a fluoroscopy operator license or registration from another country.

Commented [JSJ20]:

Department registered fluoroscopy operators may have varying levels of independence and/or supervision when operating fluoroscopy machines. This provision is added to clarify that such operation is to be within the individuals scope of practice, level of training and experience.

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- 241 (2) Limited to the category or categories of activities specifically designated in the
 242 Notice of Registration.
- 243 2.4.6.5 The registrant shall notify the Department in writing within thirty (30) calendar days of
 244 making any change of information contained in the application for registration and/or the
 245 Notice of Registration.
- 246 2.4.6.6 Except as provided by 2.4.6.7, each Notice of Registration shall expire at the end of the
 247 month in the year stated therein.
- 248 2.4.6.7 In any case in which a registrant, not less than thirty (30) calendar days prior to the
 249 expiration of the registrant's authorization, has filed an application in proper form for
 250 renewal or for a new registration authorizing the same activities, such existing
 251 authorization shall not expire until final action by the Department.
- 252 2.4.6.8 The Department will not review or otherwise process a new application or application for
 253 renewal for which no fee is received.
- 254 (1) All application fees are non-refundable.
- 255 2.4.6.9 The Department may deny, withdraw, limit or qualify its approval of any person to perform
 256 activities upon determining that such action is necessary in order to prevent undue
 257 hazard to health and safety, or for other reasonable cause.
 258

* * *

CERTIFICATION EVALUATION

2.5 Certification Evaluations.

2.5.1 Frequency of Certification Evaluations.

- 263 2.5.1.1 Each radiation machine registrant shall have its radiation machine(s) and facility
 264 evaluated by a Department-approved qualified inspector annually, except as provided in
 265 2.5.1.2 through 2.5.1.5.
- 266 (1) Each certification evaluation shall determine if the machine is safe for each
 267 intended use and is in compliance with the specifications of the equipment
 268 manufacturer and these regulations.
- 269 (2) Each certification evaluation subsequent to the initial certification evaluation shall
 270 be completed in or prior to the same calendar month as the previous certification
 271 evaluation.
- 272 (3) The calendar month of a certification evaluation of a machine in any month prior
 273 to the month in which it is due shall become the calendar month in which the
 274 subsequent certification is due.
- 275 (4) A certification evaluation conducted after the month in which it was due shall not
 276 change the month in which subsequent certification evaluations are due.

277 **2.5.1.2** Each non-healing-arts x-ray imaging machine or system regulated by Parts 5, 8 or 9 shall
 278 be inspected at least every two (2) years. These include, but are not limited to, x-ray
 279 machines used for industrial radiography, nondestructive analysis, forensics or non-

Commented [JSJ21]:
 Additional machine types are added as examples for clarity and understanding of the rule. This does not change the current inspection frequency of these devices which already fall within a 2 year inspection cycle.

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human security screening, foodstuff, packaging or equipment inspections or measurements.

2.5.1.3 Each bone densitometry, dental, podiatry or veterinary radiation machine shall be inspected at least every three (3) years, except that:

- (1) Each radiographic x-ray machine used in non-intraoral dentistry or podiatry that is capable of continuously variable kilovoltage peak (kVp) or continuously variable milliamperage (mA) or continuously variable collimation shall be inspected annually.
- (2) Each machine used in podiatry that is capable of operating at more than 30 mA shall be inspected annually.
- (3) Each volumetric dental imaging system or computed tomographic system for human use shall be inspected annually.
- (4) Each portable hand-held instrument used for any purpose on living humans shall be inspected annually.

TABLE 2-1: SUMMARY OF FREQUENCY OF RADIATION MACHINE INSPECTION CERTIFICATION EVALUATIONS

Category	Frequency of certification evaluation
<p>Excluding systems used in veterinary medicine, and unless otherwise specified in this Table 2-1, each:</p> <ul style="list-style-type: none"> General use x-ray system; CT (Computed Tomography) system; Fluoroscopy system; Dental Cone Beam Computed Tomography (CBCT) system; Volumetric dental imaging system; Hand-held x-ray imaging systems for human use; Podiatry system used at more than 30 mA; Non-intraoral dentistry or podiatry x-ray system capable of continuously variable kilovoltage peak (kVp) or continuously variable milliamperage (mA) or continuously variable collimation; Therapy systems for human or veterinary use; Security scanner x-ray systems used on living humans; All systems identified above entering the state under reciprocity for more than 180 days. 	Every one (1) year

Commented [JSJ22]: This provision is not new – it is relocated from the bottom of the table.

Commented [JSJ23]:
This provision is relocated from the lower part of Table 2-1 to group all systems with an annual (1 year) frequency together in the table.

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Category	Frequency of certification evaluation
Each industrial (non-healing-arts) x-ray imaging machine or system regulated under Parts 5, 8 or 9 including: <ul style="list-style-type: none"> Security scanners for non-living human use; X-ray fluorescence (XRF) systems; Industrial radiography/Non-destructive testing; Forensics; Tissue specimen imaging systems-; Scanning systems for food production or packaging inspection. Therapy systems for non-healing arts use. 	Every two (2) years
Except as otherwise specified in this Table 2-1, each: <ul style="list-style-type: none"> Bone densitometry (DXA) system; Dental system; Podiatry system used at less than or equal to 30 mA; Veterinary system, including hand-held units. 	Every three (3) years
Each radiographic x-ray machine used in: <ul style="list-style-type: none"> Non-intraoral dentistry or podiatry x-ray systems capable of continuously variable kilovoltage peak (kVp) or continuously variable milliamperage (mA) or continuously variable collimation. 	Every one (1) year
Pursuant to 2.5.1.3(2), each x-ray machine used in podiatry at more than 30 mA	Every one (1) year

Commented [JSJ24]: This provision is retained and relocated above with other machines on a 1 year certification evaluation (inspection) frequency.

Commented [JSJ25]: This requirement has been relocated to the top section of Table 2-1 for consistency with other machines/uses that require annual inspection.
There is no change to the inspection frequency.

Commented [JSJ26]:
This provision is amended with the intent to use consistent language and to clarify the requirements involving initial and recurring machine certification evaluations (inspections).

The proposed changes are intended to clarify existing requirements relating to initial and routine certification evaluations for all types of radiation producing machines.

Commented [JSJ27]:
The language of this provision is intended to address the initial installation of a brand new machine, a used machine that was acquired but is new to the facility, or an existing machine that has been relocated within an existing facility.

~~2.5.1.4 Except as otherwise specified in regulation, each radiation machine system shall be evaluated within ninety (90) calendar days of installation or service that could potentially affect radiation output or technique settings. Such service includes, but is not limited to, the repair or replacement of high voltage generators, tube heads, consoles or image receptor systems. Except as otherwise specified in regulation, each radiation machine shall have a certification evaluation performed within ninety (90) calendar days of:~~

~~(1) The initial installation of a new radiation machine, a radiation machine that is new to the facility, or a radiation machine that is relocated to a new area or room of an existing facility; or~~

~~(2) Any service after initial installation that could potentially affect radiation output (dose indices) or technique settings, including but not limited to the repair or replacement of high voltage generators, tube heads, consoles or image receptor systems.~~

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(3) Receipt of a new radiation machine that does not require a physical installation, including hand-held x-ray systems, or portable or fixed x-ray systems that are battery operated or that plug into an electrical outlet.

Commented [JSJ28]:

This is a new provision that is intended to clarify the certification evaluation requirements for x-ray machines that do not require a "traditional" installation, such as machines that are self-contained and operate via battery power or may become operable by simply plugging them into an electrical outlet.

2.5.1.5 Each new installation of a mammography system shall be evaluated by a registered medical physicist authorized in mammography prior to being used to perform any human examination. The following radiation machines shall have a certification evaluation performed within ninety (90) calendar days of installation and prior to being used to perform any examination on living humans:

Commented [JSJ29]:

Similar to the changes proposed for 2.5.1.4, this provision is revised to clarify that for installations of a new system, that a certification evaluation must be completed prior to use on humans and within 90 days of installation. This is a revision of the language in the current 2.5.1.6.

(1) Each initial (new) installation of a mammography imaging system. The evaluation must be performed by a registered medical physicist authorized in mammography;

(2) Each initial (new) installation of a Computed Tomography (CT) system, excluding volumetric dental imaging systems, dental CBCT systems, and digital breast tomosynthesis systems. The evaluation must be performed by or under the personal supervision of a registered medical physicist authorized in CT.

2.5.1.6 Excluding volumetric dental imaging systems, dental CBCT, and digital breast tomosynthesis systems, each new installation of a CT system shall be evaluated by a registered medical physicist authorized in CT prior to being used to perform any human examination.

Commented [JSJ30]:

The requirements of this provision are incorporated in the revised provision 2.5.1.5 (above).

2.5.1.7 Any radiation machine and/or facility not inspected in accordance with 2.5.1.1 through 2.5.1.6, or otherwise determined to be out of compliance with these regulations, shall be subject to a Department enforcement inspection and subject to the fees specified in Part 12.

Commented [JSJ31]:

Due to the elimination/incorporation of prior 2.5.1.6, this provision is renumbered.

2.5.2 Procedures for Certification Evaluations by Qualified Inspectors.

2.5.2.1 Each qualified inspector who performs a certification evaluation of a radiation machine and facility evaluation shall use procedures that are sufficient to determine compliance with these regulations.

2.5.2.2 If a radiation machine fails to meet any requirement specified by these regulations, including manufacturer's required specifications, the qualified inspector shall immediately so inform the registrant and RSO, notify the owner (registrant) or operator immediately and shall notify the department within three days after the determination.

Commented [JSJ32]:

Clarifying language is revised and added to ensure that notification to the department is made in a timely manner, consistent with state statute (law) in [25-11-104\(8\)\(a\), CRS](#).

2.5.2.3 If the radiation machine is determined to be unsafe (as provided in Part 6 and described in Appendix 6D), the qualified inspector shall affix to such radiation machine system, in a location clearly visible to the operator and patient, if applicable, an "Unsafe for Use" label authorized and issued by the Department, indicating, as applicable, that such machine is not authorized for human, animal or other use.

2.5.2.4 Reporting and Labeling Procedures.

(1) Each qualified inspector shall provide an accurate and complete Certification Evaluation Report to the registrant and to the Department on Form R 59-1, "X ray

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- 353 Machine Certification Evaluation Report," in accordance with the instructions
 354 contained in that form.
- 355 (a) A clear and legible report may be substituted for Form R 59-1, provided
 356 that it is in the same format and provides all of the information required
 357 by Form R 59-1.
- 358 (b) Violations of the regulations not related to the performance of the specific
 359 radiation machine(s) shall be reported to the registrant and Department
 360 using Form R 59-2, "X-ray Facility Compliance Evaluation Report," in
 361 accordance with the instructions contained in that form.
- 362 (c) Report(s) required by 2.5.2.4(1) shall indicate full or partial compliance
 363 and any specific violation of these regulations.
- 364 (d) Report(s) required by 2.5.2.4(1) shall include recommendations for
 365 corrective actions by the registrant (if applicable) to assist in achieving
 366 full compliance or improving radiation safety and the quality of the
 367 imaging process.
- 368 (e) The Department shall be notified within three (3) business days of
 369 radiation machine violations. Report(s) required by 2.5.2.4(1) that does
 370 not indicate violations shall be received by the Department no later than
 371 fifteen (15) calendar days after the inspection date, unless otherwise
 372 authorized by the Department.
- 373 (2) A certification label issued by the Department shall be affixed in a location clearly
 374 visible to the machine operator and patient, if applicable, when it is determined
 375 that the machine requirements of these regulations are fully met.
- 376 (a) For a machine that was found to be in full compliance, the certification
 377 label shall be affixed no later than fifteen (15) calendar days (unless
 378 otherwise authorized by the Department) after the inspection date.
- 379 (b) For a noncompliant machine, the certification label shall be affixed no
 380 later than fifteen (15) calendar days (unless otherwise authorized by the
 381 Department) after the date that full compliance was achieved.
- 382 (3) Each qualified inspector shall ensure that the following documentation is
 383 provided to the Department to confirm that each violation was corrected as
 384 required by 2.6.3.1 and/or 2.6.4.1 within thirty (30) calendar days of the date of
 385 inspection.
- 386 (a) For a noncompliant machine for which full compliance has been
 387 achieved, the completed documentation (on Form R 59-1 or equivalent)
 388 shall be received by the Department no later than fifteen (15) calendar
 389 days after the date that compliance was achieved.
- 390 (b) For a noncompliant facility, the completed documentation (on Form R 59-
 391 2 or equivalent) shall be received by the Department no later than fifteen
 392 (15) calendar days after the date that full compliance was achieved.
- 393 (4) Concealing, defacing or altering of Department-issued certification labels is
 394 prohibited.

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- 395 (5) Repeated failure by a qualified inspector, to affix certification labels or to
 396 complete certification evaluation reports in a timely manner as provided in 2.5.2.4
 397 shall be subject to review and audit as provided in 2.9 and also subject to the non
 398 routine inspection fee as provided in Part 12.
- 399 **2.6 Facility Registrant Responsibilities.**
- 400 2.6.1 The registrant shall allow only individuals who are adequately trained in radiation safety to
 401 operate the machine and perform a radiographic examination. Training shall include instruction
 402 on the specific x-ray system to be used and review of the applicable and critical requirements of
 403 the operator manual.
- 404 2.6.1.1 The facility registrant shall evaluate and document the qualifications of each individual
 405 permitted to operate any radiation machine at the facility.
- 406 (1) Each operator shall meet all radiation safety training and experience
 407 requirements of the respective State of Colorado professional licensure board, as
 408 applicable, and any applicable requirements of this Part 2.
- 409 (2) The registrant shall maintain a list of all operators of any radiation machine used
 410 by the facility registrant.
- 411 (a) For fluoroscopy equipment used in examination of a living human, a list
 412 of operators and individuals providing supervision of operators shall be
 413 maintained.
- 414 (b) The list of all operators and supervisors shall be updated at least
 415 annually as part of the radiation safety program required by Part 4,
 416 Section 4.5.
- 417 (3) Records of evaluations shall:
- 418 (a) Include current certifications and qualifications;
- 419 (b) Be updated annually by the facility; and
- 420 (c) Be produced for examination upon request during any inspection
 421 conducted under the requirements of these regulations.
- 422 2.6.1.2 A physician, chiropractor, dentist, podiatrist, or veterinarian who meets the applicable
 423 requirements of Part 6, Section 6.3.1.6(1) and these regulations, is considered to have
 424 demonstrated adequate training in radiation safety and the safe and effective use of the
 425 radiation machine (consistent with 2.6.1.5) and may operate radiation machines as part
 426 of a medical, chiropractic, dental, podiatric or veterinary practice, respectively.
- 427 2.6.1.3 For a radiologist assistant "adequately trained" shall mean that the individual is qualified
 428 as provided in Appendix 2G.
- 429 2.6.1.4 For any radiographic x-ray system used on a living human (consistent with 2.6.1.2,
 430 2.6.1.3 and 2.6.1.5 through 2.6.1.14), "adequately trained" shall mean that the individual
 431 meets the requirements of Appendix 2D.
- 432 (1) Limited-scope x-ray machine operator approval is limited to imaging procedures
 433 for x-ray examination of the skull, chest, hip/pelvis and spine/sacrum, upper
 434 extremities and lower extremities, **and abdomen**.

Commented [JSJ33]:

Images of the abdomen are added as permitted examinations that an LSO can perform. This is an imaging procedure commonly performed at facilities by LSOs. The approach is similar to imaging of the lower spine and coccyx, but with a wider field of view.

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- 435 (2) A limited-scope x-ray machine operator shall not perform radiologic procedures
 436 involving the administration or utilization of contrast media, bone densitometry,
 437 fluoroscopic, mammography, computed tomography, or radiation therapy
 438 procedures.
- 439 2.6.1.5 For fluoroscopy equipment used in examination of a living human, "adequately trained"
 440 shall mean that, in addition to meeting all applicable requirements in 2.4.5.5, 2.6.1.1
 441 through 2.6.1.4, and Appendix 2O:
- 442 (1) Each individual who either supervises a fluoroscopy procedure or operates a
 443 fluoroscopy imaging system shall have adequate training in its safe operation.
 444 This training shall be documented and include the following:
- 445 (a) Basic properties of radiation;
- 446 (b) Biological effects of x-ray;
- 447 (c) Principles and safe operation of the specific fluoroscopic x-ray system(s)
 448 to be used;
- 449 (d) Dose management including dose reduction techniques, monitoring, and
 450 recording;
- 451 (e) Applicable requirements of these regulations.
- 452 After January 1, 2022, the training required by 2.6.1.5 shall also include:
- 453 (f) Radiation protection methods for patients and staff;
- 454 (g) Units of measurement and dose, including DAP (dose-area product)
 455 values and air kerma;
- 456 (h) Factors affecting fluoroscopic outputs;
- 457 (i) High level control options; and
- 458 (j) Fluoroscopic and fluorographic (radiation) outputs of each mode of
 459 operation on the system(s) to be used clinically.
- 460 **2.6.1.6** For mammography equipment used in radiography of the human breast, "adequately
 461 trained" shall mean that the individual operator meets the requirements of **Appendix**
 462 **2M2.4.5.4(1) and 2.4.5.4(2).**
- 463 **(1) Registered provisional mammographers may operate machines and**
 464 **perform radiographic examinations under supervision while in-training**
 465 **as specified in Appendix 2M.**
- 466 2.6.1.7 For any computed tomography (CT) system used on a living human (excluding
 467 Volumetric Dental Imaging Systems, CBCT systems, and systems used for digital breast
 468 tomosynthesis) "adequately trained" shall mean that the individual operator meets the
 469 requirements of Appendix 2E.
- 470 2.6.1.8 For any bone densitometry equipment used in examination of a living human,
 471 "adequately trained" shall mean that the individual operator meets the requirements of
 472 Appendix 2F.

Commented [JSJ34]:

This provision is revised to reference section 2.4.5.4 rather than Appendix 2M, consistent with changes to these other sections. Appendix 2M will be used specifically and exclusively for provisional mammographers.

Individuals meeting 2.4.5.4(1) and (2) are considered to be qualified mammographers as defined in section 2.2. Provision (1) is added to clarify that registered provisional mammographers may perform examinations while in-training and under the applicable level of supervision, but they are not considered "qualified mammographers" until the requirements of 2.4.5.4(1) and 2.4.5.4(2) have been met.

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- 473 2.6.1.9 For radiographic equipment used in the practice of medicine, "adequately trained" shall
 474 mean that the individual operator meets all applicable requirements of the Colorado
 475 medical board.
- 476 **2.6.1.10** For radiographic equipment used in chiropractic, "adequately trained" shall mean
 477 that the individual operator meets all applicable requirements of the Colorado Board of
 478 Chiropractic Examiners and Rule 19 of 3 CCR 707-1.-
- 479 2.6.1.11 For radiographic equipment used in dentistry, including Volumetric Dental
 480 Imaging Systems, "adequately trained" shall mean that the individual operator meets all
 481 applicable requirements of the Colorado Dental Board and Rule X of 3 CCR 709-1.
- 482 **2.6.1.12** For radiographic equipment used in podiatry, "adequately trained" shall mean
 483 that the individual operator meets all applicable requirements of the Colorado Podiatry
 484 Board and ~~Rule 700 of 3 CCR 712-93~~ **CCR 712-1**.
- 485 2.6.1.13 For radiographic equipment used in veterinary medicine, "adequately trained"
 486 shall mean that the individual operator meets all applicable requirements of the Colorado
 487 Board of Veterinary Medicine and 4 CCR 727-1.
- 488 2.6.1.14 An individual, enrolled in an ARRT-recognized program or graduated from such a
 489 program, may operate radiation machines so long as the individual works under the direct
 490 supervision of a radiologic technologist or other qualified trainer and has documentation
 491 of having completed education and experience equal to that specified in the program.
- 492 (1) A graduate from an ARRT-recognized program is granted ninety (90) calendar
 493 days from the date of graduation to schedule, take and pass the ARRT radiologic
 494 technology registry examination.
- 495 (2) During the 90-day period allowed by 2.6.1.14(1), the graduate is considered to
 496 satisfy Appendix 2D requirements.
- 497 (3) A student or graduate who fails to pass the registry examination has not met the
 498 requirements of Appendix 2D and shall not operate any radiation machine
 499 system on a living human unless otherwise authorized by the Department.
 500

* * *

RECIPROCITY

2.8 Out-of-State Radiation Machines.

- 504 2.8.1 Subject to these regulations, any person who desires to bring radiation machines into this state
 505 for temporary use is hereby granted authorization to conduct activities using these machines for a
 506 period not to exceed a total of 180 days in any calendar year, provided that:
- 507 2.8.1.1 The out-of-state registration, and/or other documents authorizing the use of radiation
 508 machines issued by the agency having jurisdiction where the out-of-state registrant
 509 maintains an office for directing the registered activity and at which radiation safety
 510 records are normally maintained, does not limit the activity authorized by such document
 511 to specified installations or locations; and
- 512 2.8.1.2 The person proposing to bring such machines into Colorado shall give written notice to
 513 the Department at least fifteen (15) calendar days before such machine is to be used in

Commented [JSJ35]:
 Error correction – removal of unneeded period.

Commented [JSJ36]:
 Update the cross-reference due to recodification of
 Podiatry rules.

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- 514 the state, unless otherwise authorized by the Department as provided in 2.8.2. The notice
 515 shall be made using the Department's "X-ray Reciprocity Request" Form R-200 and shall
 516 include all information required by that form.
- 517 (1) As part of this notice, the person requesting reciprocity shall certify that:
- 518 (a) A copy of all applicable parts of these regulations shall be available at
 519 each use location in State of Colorado;
- 520 (b) Each machine has been evaluated and determined to be in compliance
 521 with these, or equivalent, regulations; and
- 522 (c) The operation of each radiation machine shall be in accordance with the
 523 applicable requirements of these regulations.
- 524 (2) In the case of a request to perform a healing arts screening program within the
 525 State, submit a completed Form R-300, "Application for Registration – Healing
 526 Arts Screening," with the reciprocity request, including all of the information
 527 required, pursuant to Part 6, Appendix 6F, by the form and any accompanying
 528 instructions.
- 529 (3) In the case of a request to perform mammography screening within the State, a
 530 copy of the facility's mammography certificate issued by the FDA (21 CFR **Part**
 531 900.11(a)) and applicable American College of Radiology credentials shall be
 532 included with the reciprocity request.
- 533 (4) The person requesting reciprocity shall also supply such other information as the
 534 Department may request.
- 535 2.8.1.3 The out-of-state registrant complies with all applicable regulations of the Department; and
- 536 2.8.1.4 The out-of-state registrant shall at all times during work at any work location within the
 537 State have available the pertinent documentation as required by these regulations,
 538 including:
- 539 (1) Pertinent registration documentation;
- 540 (2) Written authorization from the Department for in-state activities;
- 541 (3) Applicable sections of these regulations as certified pursuant to 2.8.1.2(1)(a);
- 542 (4) Documentation that each radiation machine has been evaluated in accordance
 543 with these regulations, or other state regulations which are equivalent; and that
- 544 (a) The machines comply with the manufacturer's required specifications;
- 545 (b) The evaluations are current, having been performed within one year prior
 546 to entry into the State as required in 2.5; and
- 547 (5) In the case of mammography-related functions, a copy of the mammography
 548 certificate issued by the FDA, applicable American College of Radiology
 549 credentials, quality control records, personnel records, and the most recent
 550 medical physicist survey.

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- 551 2.8.2 Based upon an application that includes documentation of why it is not possible or is an undue
552 hardship to provide fifteen (15) calendar days notice, the Department may:
- 553 2.8.2.1 Grant permission to proceed sooner; or
- 554 2.8.2.2 Waive the requirement for filing additional written notifications during the remainder of the
555 calendar year following the receipt of the initial notification from a person engaging in
556 activities pursuant to 2.8.1.
- 557 2.8.3 While in the State of Colorado, all radiation machines are subject to inspection and may ~~be~~
558 ~~required to be inspected and/or certified~~ **require a certification evaluation** by a qualified
559 inspector who is registered with the Department.
- 560 2.8.4 The out-of-state registrant shall notify the Department within one hour after arrival at the actual
561 work location within the State and shall notify the Department within one hour after any change of
562 work location within the State.
- 563 2.8.5 If multiple individuals work concurrently at more than one work location under an approval
564 granted pursuant to 2.8.1, each day worked per location shall be counted separately toward the
565 limit of 180 cumulative total days per calendar year.
- 566 2.8.6 The Department may revoke, limit, or qualify its approval for the use of radiation machines in the
567 State upon determining that the approval was based on false or misleading information submitted
568 to the Department or that such action is necessary in order to prevent undue hazard to public
569 health and safety or property.
- 570 2.8.7 Each person operating a radiation machine within the State under reciprocity in areas of exclusive
571 federal jurisdiction shall comply with the applicable federal requirements.
- 572 * * *
573

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PART 2, APPENDIX 2D: X-RAY SYSTEM OPERATOR ADEQUATE RADIATION SAFETY TRAINING AND EXPERIENCE, INCLUDING LIMITED SCOPE X RAY MACHINE OPERATOR (LSO)

Each operator of a radiation machine used for healing arts purposes on living humans other than in dentistry, chiropractic or podiatry, shall meet the following education and experience requirements:

2D.1 Is certified or registered by:

2D.1.1 The American Registry of Radiologic Technologists as a Radiologic Technologist; or

2D.1.2 A specialty board determined by the department to have substantially equivalent requirements for certification as the American Registry of Radiologic Technologists,

Or

2D.2 Is certified by the Department as a State of Colorado-registered limited scope operator, to conduct only those radiographic examinations specified in Section 2.6.1.4 and having satisfactorily completed:

2D.2.1 At least 80 hours of didactic training providing the minimum hours of instruction in the specific subjects listed in 2D.2.1.1 through 2D.2.1.6:

2D.2.1.1 Basic X-Ray Physics—20 hours

(1) Structure of matter and the atom

(2) General description of production of x-rays

(3) X-ray emission, quantity and quality

(4) Function of filtration and effects it has on x-ray beam collimation

(5) Types of function of beam limiting devices

(6) Design, features and functions of x-ray tubes

(7) Circuitry of the x-ray machine

2D.2.1.2 Radiobiology—3 hours

(1) Effects of ionizing radiation on the human body

(2) Molecular and cellular radiobiology

(3) Factors that cause somatic and genetic damage

2D.2.1.3 Radiation Protection—6 hours

(1) ALARA

(2) Shielding materials

(3) Radiation quantity and units of measurement

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604	(4)	Basic interactions of x-rays with matter
605	(5)	Primary and secondary scatter
606	(6)	Importance of time, distance, shielding
607	(7)	Maximum permissible doses: occupational and public
608	(8)	Patient protection
609	2D.2.1.4.	Principles of Exposure—15 hours
610	(1)	Factors that control and influence radiographic quality
611	(2)	Properties of x-rays
612	(3)	Size distortion
613	(4)	Shape distortion
614	(5)	kVp, mAs, time
615	(6)	AEC and manual
616	(7)	Grids
617	(8)	Collimation
618	(9)	Intensifying screens
619	(10)	X-ray films and holders
620	(11)	Artifacts
621	(12)	Inverse square law
622	2D.2.1.5	Procedures and Processing—4 hours
623	(1)	Film storage and handling
624	(2)	Manual, automatic processing film processing and troubleshooting
625	(3)	Computed Radiography (CR)
626	(4)	Digital Radiography (DR)
627	(5)	PACs
628	(6)	Quality assurance / quality control
629	2D.2.1.6	Anatomy and Positioning—32 hours
630	(1)	Chest—4 hours
631	(2)	Extremity—12 hours

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632	(3)	Spine—8 hours
633	(4)	Skull—8 hours;
634	and	
635	2D.2.2	At least 480 hours of clinical training during which time the individual may perform x-ray
636		examinations only under personal direct supervision of a qualified trainer, including:
637	2D.2.2.1	At least 320 hours experiential training at a clinic; and
638	2D.2.2.2	No more than 160 hours of laboratory training (exclusive of the didactic
639		hours required by 2D.2.1.1 through 2D.2.1.6);
640	and	
641	2D.2.3	Performance of the following imaging procedures (at least 808 4 examinations in total,
642		with record of each examination kept on file):
643	2D.2.3.1	Ribs—4 examinations;
644	2D.2.3.2	Hand—4 examinations;
645	2D.2.3.3	Wrist—4 examinations;
646	2D.2.3.4	Forearm—4 examinations;
647	2D.2.3.5	Elbow—4 examinations;
648	2D.2.3.6	Humerus—4 examinations;
649	2D.2.3.7	Shoulder—4 examinations;
650	2D.2.3.8	Clavicle—4 examinations;
651	2D.2.3.9	Femur—4 examinations;
652	2D.2.3.10	Tibia – Fibula—4 examinations;
653	2D.2.3.11	Ankle—4 examinations;
654	2D.2.3.12	Foot—4 examinations;
655	2D.2.3.13	Sinuses—4 examinations;
656	2D.2.3.14	Skull—4 examinations;
657	2D.2.3.15	Facial Bones—4 examinations;
658	2D.2.3.16	C-Spine—4 examinations;
659	2D.2.3.17	Thoracic Spine—4 examinations;
660	2D.2.3.18	Lumbar Spine—4 examinations;

Commented [JSJ37]:

The proposed change clarifies that supervision must be direct rather than personal during the clinical training period, consistent with the language of 2.6.1.14.

"Direct supervision" means that the supervisor must be available in the facility to assist the individual being supervised, while "personal supervision" means the supervisor is in the same room as the supervised individual. Both "direct" and "personal" supervision are defined in [Part 1 of the radiation regulations](#).

Commented [JSJ38]:

The total number of exams is updated to reflect the added abdominal exams. Training on abdomen exams is typically included in the curriculum of LSO training programs.

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661 2D.2.3.19 Chest—4 examinations;
662 2D.2.3.20 Hip / Pelvis—4 examinations;
663 **2D.2.3.21 Abdomen—4 examinations.**
664 and
665 2D.2.4 A passing score on the American Registry of Radiologic Technologists (ARRT)
666 examination for the Limited Scope of Practice in Radiography. A passing score is:
667 2D.2.4.1 A score of at least 75% correct on the Core Module, and
668 2D.2.4.2 An average score of at least 75% correct on the Radiographic
669 Procedures Modules for Chest, Extremities, Skull/Sinuses, and Spine.
670
671 2D.2.5 And, has maintained a minimum of twenty-four (24) hours of continuing education every
672 two years in the areas of radiology, radiation safety, radiography and similar fields. This
673 education shall:
674 2D.2.5.1 Conform to guidelines equivalent to the most current revision of the
675 ARRT *Continuing Education Requirements for Renewal of Registration*;
676 * * *
677

Commented [JSJ39]:

Consistent with the changes in 2.6.1.4(1), abdomen exams are incorporated here.

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PART 2, APPENDIX 2F: BONE DENSITOMETRY (BD) ADEQUATE RADIATION SAFETY TRAINING AND EXPERIENCE

Each operator of a dual-energy x-ray absorptiometry system used on a living human shall meet the following education and experience requirements:

2F.1 Is certified or registered:

2F.1.1 As R.T.(R), R.T.(M), R.T.(N), R.T.(T), or CNMT; or

2F.1.2 By The International Society for Clinical Densitometry (ISCD), combined with or including the didactic radiation safety training in 2F.2.1.1, 2F.2.1.2 and 2F.2.1.3; or

2F.1.3 By A specialty board determined by the department to have substantially equivalent requirements for certification;

Or

2F.2 Is accepted by the Department as having satisfactorily completed:

2F.2.1 At least 30 hours of didactic training recognized by the Department that provided the minimum hours of instruction (as part of, or in addition to, specialty certificate and equipment operation training) in the specific subjects listed in 2F.2.1.1 through 2F.2.1.9:

* * *

and

2F.2.2 At least 480 hours of clinical training during which time DXA examinations are performed only under direct supervision of a Colorado qualified bone densitometry equipment operator or other qualified trainer:

2F.2.3 Performance of the following imaging procedures (at least 30 examinations in total, with record of each examination kept on file):

2F.2.3.1 DXA scanning of the forearm—10 examinations;

2F.2.3.2 DXA scanning of the lumbar spine—10 examinations;

2F.2.3.3 DXA scanning of the proximal femur—10 examinations;

and

2F.2.4 A passing score on the American Registry of Radiologic Technologists (ARRT) Bone Densitometry Equipment Operator Examination. ~~A passing score is a score of at least 75% correct.~~

and

2F.2.5 Has maintained a minimum of eighteen (18) hours continuing education every three years, documented by certificate(s) or other attestation(s) of satisfactory completion.

Commented [JSJ40]:

For Bone Densitometry Operators, the acceptable score is not determined by the department, but rather, is determined by the testing organization (ARRT). The ARRT provides the applicant with the score and notes whether it is passing or not passing. Due to changes in the ARRT test scoring process from a "percentage" value to a "scaled" value score, the reference to 75% is removed from the rule.

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712 **PART 2, APPENDIX 2G: RADIOLOGIST ASSISTANT (RA) ADEQUATE RADIATION SAFETY**
713 **TRAINING AND EXPERIENCE**

714 Any person who acts as a Radiologist Assistant or Radiologist Practitioner Assistant shall be an individual
715 who is 18 years of age and has provided written documentation as evidence of:

716 2G.1 Current certification as both R.T.(R) and a

717 2G.1.1 Registered Radiologist Assistant (R.R.A.(**ARRT**)); or

718 2G.1.2 Radiology Practitioner Assistant (RPA) prior to January 1, 2008;

719 And

720 2G.2 Having:

721 2G.2.1 Met the specific qualifications in education recognized by the ARRT, ASRT, ACR, or
722 equivalent nationally recognized entity; and

723 2G.2.2 Been trained and worked under the direction of a radiologist.

724 * * *

725

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**~~PART 2, APPENDIX 2M: QUALIFIED MAMMOGRAPHER ADEQUATE RADIATION SAFETY
 TRAINING AND EXPERIENCE~~**

~~Any individual who performs mammography shall meet the following educational and experience requirements:~~

~~2M.1— Is certified by the American Registry of Radiologic Technologists in Mammography and meets the following initial requirements;~~

~~2M.1.1 Forty (40) hours or more documented training including breast anatomy and physiology, positioning and compression, quality assurance/quality control techniques, and imaging of patients with breast implants; and~~

~~2M.1.2 Eight (8) hours or more documented training in each mammography modality to be used by the technologist in performing mammography examinations; and~~

~~2M.1.3 Performance of at least 25 mammograms under the direct supervision of a qualified mammographer.~~

~~2M.2— Or, is a provisional mammographer working under the direct supervision of a qualified mammographer, who:~~

~~2M.2.1 Is enrolled in or has completed a structured and documented training program that meets the requirements of 2M.1.1 and 2M.1.2; and~~

~~2M.2.2 Has been approved as a Provisional Mammographer prior to performing mammograms to meet the requirements of 2M.1.3.~~

~~2M.3— Continuing education and continuing experience:~~

~~2M.3.1 Continuing education:~~

~~2M.3.1.1— A mammographer shall complete fifteen (15) hours of continuing education within the immediate prior 36 months.~~

~~(1) — A mammographer who fails to meet the continuing education requirement of 2M.3.1.1 shall obtain a sufficient number of continuing education units in mammography to bring their total up to at least fifteen (15) in the previous 36 months.~~

~~(2) — A mammographer who fails to meet the continuing education requirement of 2M.3.1.1 shall work only under direct supervision of a qualified mammographer until the requirement is met.~~

~~2M.3.2 Continuing Experience~~

~~2M.3.2.1— A mammographer shall have performed a minimum of 200 mammography examinations within the immediate prior 24 months.~~

Commented [JSJ41]:

The title and body of Appendix 2M is revised in its entirety for consistency with other proposed changes in Part 2 relating to mammography.

Refer to the proposed changes and side margin comments below for additional information.

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(1) — A mammographer who fails to meet this continuing experience requirement shall perform a minimum of 25 mammography examinations under the direct supervision of a qualified mammographer before resuming the performance of unsupervised mammography examinations.

PART 2, APPENDIX 2M: REQUIREMENTS FOR REGISTRATION AS A PROVISIONAL MAMMOGRAPHER

Any individual who performs mammography and does not meet the requirements of 2.4.5.4(1):

2M.1 Shall have completed or be currently enrolled in a structured and documented training program that requires:

2M.1.1 Forty (40) hours or more of documented training that includes breast anatomy and physiology, positioning and compression, quality assurance/quality control techniques, and imaging of patients with breast implants; and

2M.1.2 Eight (8) hours or more documented training in each mammography modality to be used by the technologist in performing mammography examinations;

And

2M.2 Shall, prior to performing mammograms on living humans, register with the department as a Provisional Mammographer.

2M.2.1 Each applicant for a provisional mammographer registration shall submit the Form R-64 series application and shall include all information required by the department as indicated on the form(s) and all accompanying instructions.

2M.2.2 The provisional mammographer registration is issued for a period of one year and may be renewed one time.

And

2M.3 While in training, shall perform at least 100 mammography examinations on patients under the supervision of a qualified mammographer as follows:

2M.3.1 The initial 25 mammography examinations shall be performed under the personal supervision of a qualified mammographer.

2M.3.2 All remaining mammography examinations after the initial 25 shall be performed under the direct supervision of a qualified mammographer.

2M.3.2 All mammography examinations required by 2M.3.1 and 2M.3.2 shall be documented.

Documentation shall include the name of the supervised individual (individual in-training), the type of exam/modality, the facility name, the examination date, and the name of the supervising qualified mammographer or individual.

* * *

Commented [JSJ42]: Appendix 2M, including the title, is revised and restructured in its entirety for consistency with other proposed changes in Part 2. There is no intent to change the current process for mammography qualifications or for those in-training to become fully qualified mammographer. The proposed changes are to provide clarity and understanding in the rule.

As proposed, Appendix 2M will apply only to those individuals who are in-training to become fully qualified mammographers in Colorado and who cannot currently meet the requirements of 2.4.5.4(1). The provisional mammographer registration is designed to ensure that those in-training have a clear path to becoming fully qualified as mammographers.

The type/level of supervision required for those in training to become a mammographer will vary through the training process. This is clarified in the proposed changes to reflect the current process and expectations where closer supervision is needed during the initial practice examinations being performed versus those completed later in the training process.

Commented [JSJ43]: The requirements of 2M1 are equivalent to those of 2M1 of the current rule.

Commented [JSJ44]: This revised provision restates and clarifies that an individual must register as a Provisional mammographer prior to performing exams on humans, consistent with current practice. The requirements of this section have been relocated from 2.4.5.4(1) of the current rule.

Commented [JSJ45]: The type/level of supervision required for those in training to become a fully qualified mammographer will vary through the training process. This is clarified in the proposed changes to reflect the current process and expectations where closer supervision is needed during the initial practice examinations being performed versus those completed later in the training process.

Commented [JSJ46]: This is a new provision added to ensure that those in-training maintain the necessary documentation to become fully qualified mammographers.

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PART 2, APPENDIX 20: FLUOROSCOPY IMAGING SYSTEM OPERATOR ADEQUATE RADIATION SAFETY TRAINING AND EXPERIENCE

Except for those individuals exempted in 2.4.5.5(1), any person who operates a fluoroscopic machine or a machine capable of fluoroscopic imaging while in fluoroscopic mode for clinical purposes, shall be limited to a licensed Physician Assistant, ~~or licensed~~ Advanced Practice Registered Nurse, ~~or a nationally certified and registered Cardiovascular Lab Specialist and~~ who is at least 18 years of age working within their scope of practice, and:

20.1 Meets the following requirements:

20.1.1 Has completed a course that includes at least forty (40) hours of education on topics that include, but are not limited to, radiation physics, radiation biology, radiation safety and radiation management applicable to fluoroscopy;

And

20.1.2 Has completed forty (40) hours of clinical experience in the use of fluoroscopy for guidance in diagnostic and therapeutic procedures under the personal supervision of a Colorado licensed physician;

And

~~20.1.3 Has received a score of 75% or greater on the ARRT fluoroscopy examination;~~
20.1.3 Meets the requirements of 20.1.3.1 or 20.1.3.2 or 20.1.3.3, as follows:

20.1.3.1 Is a Physician Assistant or Advanced Practice Registered Nurse who has received a passing score on the American Registry of Radiologic Technologists (ARRT) fluoroscopy operators examination.

Or

20.1.3.2 Is registered through Cardiovascular Credentialing International (CCI) as a Registered Cardiovascular Invasive Specialist (RCIS) or a Registered Electrophysiology Specialist (RCES);

Or

20.1.3.3 Is registered with another organization that has been specifically approved in writing by the department.

And

20.1.4 Is registered **with the department** in accordance with Section 2.4.5.5.

And

~~20.2 Maintains their registration by submission of the following with their registration renewal application:~~
Maintains their department fluoroscopy operator registration by submitting the registration renewal application and required fee along with the following:

20.2.1 **Physician Assistants and Advanced Practice Registered Nurses shall submit Aa current active state of Colorado license issued by the Colorado Department of Regulatory Agencies.; and**

Commented [JSJ47]:

This provision relating to a passing score is removed from the rule here as the passing score is determined by the testing organization (ARRT). Additionally, ARRT is moving to a scaled score approach for testing rather than a percentage based score, making the % passing score obsolete in the future.

Commented [JSJ48]:

This adds healthcare professionals who currently work in the field of cardiovascular imaging and treatment alongside and under the supervision of physicians. The addition of these allied health professionals will help align the rule with the actual practices being conducted in Colorado cardiac lab facilities.

Commented [JSJ49]:

This provision is intended to allow flexibility in the rule to allow addressing unique qualifications of a given individual on a case-by-case basis.

Commented [JSJ50]:

With the addition of cardiac catheterization lab professionals to the fluoroscopy registration process, this provision is revised to add clarity for the documents that are required to be submitted during the renewal process. This is not a change from the current requirements.

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840 20.2.2 **Nationally certified/registered Cardiovascular Lab Specialists shall submit a copy**
841 **of their active N**~~national certification/-registration.in their respective profession.~~

842 [END OF RULE]

DRAFT 1 11/30/2023

DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Hazardous Materials and Waste Management Division

State Board of Health

RADIATION CONTROL - X-RAY IMAGING IN THE HEALING ARTS

6 CCR 1007-1 Part 06

[Editor's Notes follow the text of the rules at the end of this CCR Document.]

Adopted by the Board of Health August 19, 2020 February 21, 2024, effective date October 15, 2020 April 14, 2024.

PART 6: X-RAY IMAGING IN THE HEALING ARTS

6.1 Purpose and Scope.

6.1.1 Authority.

6.1.1.1 Rules and regulations set forth herein are adopted pursuant to the provisions of sections 25-1-108, 25-1.5-101(1)(I), and 25-11-104, CRS.

6.1.2 Basis and Purpose.

6.1.2.1 A statement of basis and purpose accompanies this part and changes to this part. A copy may be obtained from the Department.

6.1.3 Scope.

6.1.3.1 Part 6 establishes requirements, for which a registrant is responsible, for use of diagnostic and interventional x-ray equipment and imaging systems in the healing arts.

6.1.4 Applicability

6.1.4.1 The provisions of this part are in addition to, and not in substitution for, other applicable provisions in Part 1, 2, 4, 7, 10, 24 and other parts of these regulations.

6.1.4.2 Part 24 also applies to certain healing arts x-ray imaging registrants.

6.1.4.3 The requirements and provisions of this part apply to each registrant or applicant for registration subject to this part unless specifically exempted.

6.1.5 Published Material Incorporated by Reference.

6.1.5.1 Throughout this Part 6, federal regulations, state regulations, and standards or guidelines of outside organizations have been adopted and incorporated by reference. Unless a prior version of the incorporated material is otherwise specifically indicated, the materials incorporated by reference cited herein include only those versions that were in effect as

Commented [JSJ1]:

Editorial note 1: All comments (such as this one) shown in the right side margin of this draft document are for information purposes only to assist the reader in understanding the proposed rule change during the review and comment process.

These side margin notes are **not** part of the rule and all comments will be deleted prior to publication of the final rule by the Colorado Secretary of State.

Editorial note 2: Alignment and formatting corrections and minor typographical adjustments may be made in the rule and may not be specifically identified with a side margin comment.

Editorial note 3: Colorado's radiation regulations must be consistent with the current model rules of the Conference of Radiation Control Program Directors (CRCPD), Inc.

Editorial note 4: This draft is not a complete rule. Unaffected sections or provisions have been removed from the rule and are not shown in this draft. Unaffected sections/provisions are denoted with a " * " and remain as-is in the current rule with no changes. Some provisions may be shown with no changes and are provided for reference purposes.

Commented [JSJ2]:

The stated adoption and effective dates are tentative and subject to change, pending the Board of Health meeting schedule, preliminary acceptance by the Board, final adoption by the Board, and the Colorado Register publication dates.

The anticipated dates are based on the annual rulemaking hearing schedule (regulatory agenda) for the Department which may be found [online](#).

Commented [JSJ3]:

This section updated to reflect expected effective dates of the rule, and revised or more specific web page addresses.

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of the most recent effective date of this Part 6 (~~October, 2020~~**April 2024**), and not later amendments or editions of the incorporated material.

6.1.5.2 Materials incorporated by reference are available for public inspection, and copies (including certified copies) can be obtained at reasonable cost, during normal business hours from the Colorado Department of Public Health and Environment, Hazardous Materials and Waste Management Division, 4300 Cherry Creek Drive South, Denver, Colorado 80246. Additionally, <https://www.colorado.gov/cdphe/radregs><https://cdphe.colorado.gov/hm/radregs> identifies where the incorporated federal and state regulations are available to the public on the internet at no cost. A copy of the materials incorporated in this Part is available for public inspection at the state publications depository and distribution center.

6.1.5.3 Availability from Source Agencies or Organizations.

- (1) All federal agency regulations incorporated by reference herein are available at no cost in the online edition of the Code of Federal Regulations (CFR) hosted by the U.S. Government Printing Office, online at www.govinfo.gov <https://www.govinfo.gov/app/collection/cfr/>.
- (2) All state regulations incorporated by reference herein are available at no cost in the online edition of the Code of Colorado Regulations (CCR) hosted by the Colorado Secretary of State's Office, online at <https://www.sos.state.co.us/CCR/RegisterHome.do> <https://www.sos.state.co.us/CCR/NumericalDeptList.do#1000>.
- (3) Copies of the standards or guidelines of outside organizations are available either at no cost or for purchase from the source organizations listed below.

- a. American Association of Physicists in Medicine (AAPM)
 1631 Prince Street
 Alexandria, VA 22314
 Phone 571-298-1300
aapm.org
- b. National Council on Radiation Protection and Measurements (NCRP)
 7910 Woodmont Avenue, Suite 400
 Bethesda, MD 20814-3095
 Phone: 301-657-2652
ncrponline.org

* * *

[* * * indicates unaffected sections of the rule]

GENERAL REGULATORY PROVISIONS

6.3 General and administrative requirements.

6.3.1 Administrative Controls.

6.3.1.1 Each radiation machine used in the healing arts in the State of Colorado shall be registered with the Department as required by Part 2, Section 2.4 and inspected as prescribed in Part 2, Section 2.5.

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- 77 6.3.1.2 Each radiation machine used on humans shall meet the Federal Performance Standards,
 78 Subchapter J - Radiological Health, 21 CFR 1020.30 through 1020.33.
- 79 (1) Diagnostic X-ray systems and their associated components used on humans and
 80 certified pursuant to the Federal X-Ray Equipment Performance Standard (21
 81 CFR 1020.30 through 1020.33) shall be maintained in compliance with applicable
 82 requirements of that standard.
- 83 (2) Diagnostic x-ray components and systems certified in accordance with 21 CFR
 84 Part 1020 shall not be modified such that the component or system fails to
 85 comply with any applicable requirement of 21 CFR Part 1020 or Part 6.
- 86 (3) The owner of a diagnostic x-ray system who uses the system in a professional or
 87 commercial capacity may have the system modified provided the modification
 88 does not result in the failure of the system or component to comply with the
 89 applicable requirements of Part 6 and any modification is completed by a
 90 registered service company in accordance with 6.3.3.1(5).
- 91 (a) The owner who causes such modification need not submit the reports
 92 required by Part 6, provided the owner records the date and the details
 93 of the modification in the system and maintains this information, and
 94 provided the modification of the x-ray system does not result in a failure
 95 to comply with Part 6.
- 96 (b) Registered service companies shall submit to the Department, records of
 97 modifications of the x-ray system, as required by these regulations.
- 98 (4) Limited exemption from this requirement may be granted by the Department for a
 99 radiation machine manufactured prior to August 4, 1974, provided the registrant
 100 demonstrates that such exemption will not result in undue risk.
- 101 6.3.1.3 The registrant or the registrant's agent shall use approved providers of services,
 102 consistent with Part 2, Section 2.6., including but not limited to operation of equipment,
 103 inspection of radiation machines and facilities, and assembly, installation, service and/or
 104 calibration of radiation machines.
- 105 6.3.1.4 An x-ray imaging system that is found to be non-compliant with the requirements of these
 106 regulations 30 days beyond initial discovery, may continue to be used for up to 90 days
 107 provided:
- 108 (1) The system has not been determined to be unsafe for routine use in accordance
 109 with Appendix 6D;
- 110 (2) Continued use poses no significant radiation risk to patients, members of the
 111 public or employees;
- 112 (3) Does not significantly result in degraded image quality; and
- 113 (4) The registrant obtains in writing, an authorization for continued use from the
 114 Department.
- 115 6.3.1.5 An x-ray imaging system that is determined as provided in Appendix 6D to be unsafe for
 116 human, animal, or other use shall not be operated for diagnostic or therapeutic purposes.
- 117 6.3.1.6 A radiation machine in the healing arts shall be operated:

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- 118 (1) By a physician, chiropractor, dentist, podiatrist or veterinarian who has a current
 119 active State of Colorado license to practice the healing arts and has met the
 120 applicable requirements of Part 2 of the regulations; or
- 121 (2) By an individual authorized by and licensed in accordance with State of Colorado
 122 statutes to engage in the healing arts and has met the applicable requirements of
 123 Part 2 of the regulations; and
- 124 (a) Whose license, licensing body, or licensing regulations and requirements
 125 authorize such operation; and
- 126 (b) Such operation is within the standard and acceptable scope of practice
 127 for the licensed individual; or
- 128 (3) By an individual who is under the general supervision of a licensed individual
 129 authorized in 6.3.1.6(1) or 6.3.1.6(2), where:
- 130 (a) The individual operator being supervised has met the applicable training
 131 requirements of Part 2; and
- 132 (b) Such supervision by a licensed individual is consistent with the
 133 individual's license, licensing body, regulations, and the standard and
 134 acceptable scope of practice for the supervising individual; **or**
- 135 **(4) By an operator who is under the personal supervision of a licensed**
 136 **individual authorized in 6.3.1.6(1), and where:**
- 137 **(a) The operator being supervised has met the applicable training**
 138 **requirements of Part 2, Appendix 20; and**
- 139 **(b) Such operation is within the standard and acceptable scope of**
 140 **practice of the operator being supervised.**
- 141 **6.3.1.7** Exposure under Part 6 of any **living** human being to the useful beam of an x-ray system
 142 shall be solely for healing arts purposes, **or for the purposeful exposure of a living**
 143 **human research subject in accordance with Part 2, section 2.4.1.3,** and only after
 144 such exposure has been authorized by:
- 145 (1) A physician, chiropractor, dentist, or podiatrist who has a current active State of
 146 Colorado license to practice in the healing arts; or
- 147 (2) An individual authorized by and licensed in accordance with State of Colorado
 148 statutes to engage in the healing arts, and:
- 149 (a) Whose license, licensing body, or licensing regulations and requirements
 150 permit authorizing such exposure; and
- 151 (b) Such exposure is within the standard and acceptable scope of practice
 152 for the licensed individual.

* * *

Commented [JSJ4]:

In parallel with the concurrent (2023) proposed changes to Part 2 of the radiation regulations, this new provision is added to tie-in non-physician cardiac catheterization lab professionals as operators of fluoroscopy systems who operate those systems only under personal (in room) supervision of physicians.

Use of fluoroscopy systems by cardiac catheterization lab professionals is routine and common in Colorado. Such use is under the personal (in room) supervision of a physician.

Qualifications for such individuals has been added in Part 2, Appendix 20.

Commented [JSJ5]:

Language is added to address the use of x-ray devices on living humans under Part 6 for research purposes.

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157 6.5.12 Fluoroscopy specific operator qualifications

158 6.5.12.1 Operation of a fluoroscopic x-ray system shall be performed under direct
 159 supervision, **except where otherwise specified in these regulations.**

160 6.5.12.2 In addition to the applicable sections of these regulations, all persons operating
 161 or supervising the operation of a fluoroscopic x-ray system (including for FGI procedures)
 162 for clinical purposes on living humans shall be limited to persons meeting the applicable
 163 requirements of 6.3.1.6, 6.3.1.9, and Part 2, Section 2.4.5.5, and 2.6.1.5.

164 * * *

166 6.5.14 Registered Medical Physicist evaluations of fluoroscopic equipment.

167 6.5.14.1 ~~Fluoroscopic equipment shall be evaluated by a RMP within 90 days of~~
 168 ~~installation and following maintenance of the system that may affect the exposure rate.~~
 169 ~~Thereafter, the measurements shall be made as specified in Part 2, Section~~
 170 ~~2.5. Fluoroscopic x-ray systems shall have a certification evaluation performed by a~~
 171 ~~RMP under the frequency and conditions specified in Part 2, Section 2.5.~~

172 At a minimum these evaluations shall include:

- 173 (1) A measurement of entrance exposure rates that covers a representative sample
 174 of patient thicknesses, including those that are expected to drive the system to
 175 maximum output in all modes clinically used, including fluoroscopy, high-level
 176 control, and acquisition, when available. These measurements shall:
- 177 (a) For systems without automatic exposure control, be made utilizing a
 178 milliamperage and kVp typical of the clinical use of the fluoroscopic
 179 system;
- 180 (b) For systems with automatic exposure control, be made utilizing sufficient
 181 attenuating material in the useful beam to produce a milliamperage and
 182 kVp typical of the clinical use of the fluoroscopic system;
- 183 (2) A measurement and verification of compliance of maximum AKR for fluoroscopy
 184 and high-level control, if available. Measurements shall be made in accordance
 185 with Section 6.5.5.4.
- 186 (3) An evaluation of image quality in the modes necessary to achieve the clinical
 187 imaging task(s).
- 188 (4) An evaluation of the operation of the 5-minute timer, warning lights, interlocks,
 189 and collision sensors.
- 190 (5) An evaluation of the beam quality and collimation in the fluoroscopy mode.
 191 Additional evaluation may be needed where magnification impacts collimation.
- 192 (6) An evaluation of the availability and accuracy of technique indicators and
 193 integrated radiation dose displays.
- 194 (7) An evaluation of changes to the fluoroscopy system impacting radiation safety.

Commented [JSJ6]:

The added language clarifies that there may be conditions where other higher levels of supervision may be required or specified, depending on the qualifications of the individual being supervised and/or their scope of practice.

The terms direct, personal, and general supervision are defined in [Part 1 of the regulations](#).

Commented [JSJ7]:

To avoid duplicate and/or inconsistent language between Part 6 and Part 2, this section is simplified and revised to defer to Part 2 for certification evaluation frequency and conditions.

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195 (8) When operating in the spot image mode, an evaluation of the coefficient of
 196 variation of air kerma for both manual and automatic exposure control systems to
 197 ensure the value does not exceed 0.05.
 198
 199 * * *

200 **6.6 Requirements for use of general purpose x-ray imaging systems**

201 6.6.1 Administrative controls.

202 6.6.1.1 The requirements of Section 6.6 apply to all registrants using general diagnostic imaging
 203 systems, excluding the following:

- 204 (1) Fluoroscopy use which is described in 6.5;
 205 (2) Dental use which is described in 6.7;
 206 (3) Veterinary use which is described in 6.8;
 207 (4) Computed tomography use which is described in 6.9;
 208 (5) Mammography use which is described in 6.10.

209 6.6.1.2 Certification evaluation (~~testing~~inspection) requirements.

210 (1) Within 90 days of ~~use~~initial installation:

- 211 (a) Digital radiographic systems shall have an initial certification evaluation
 212 performed by a RMP;
 213 (b) Non-digital radiographic systems shall have an initial certification
 214 evaluation performed by a Qualified Inspector authorized for the specific
 215 machine type.
 216 (2) Periodic certification evaluations shall be performed at the frequency specified in
 217 Part 2, Section 2.5 by Qualified Inspectors authorized for the specific machine
 218 type.
 219 (3) Testing of display monitors which are under the control of the registrant shall be
 220 performed by or under the supervision of an RMP in accordance with 6.3.5.6.
 221 (4) Certification evaluations and testing shall follow nationally accepted standards or
 222 those recognized by the Department.
 223
 224 * * *

225 **6.7 Requirements for use of dental imaging systems.**

226 6.7.1 Administrative Controls.

227 6.7.1.1 Intraoral dental x-ray machines shall not be operated at less than a measured 51 kVp,
 228 after January 1, 2022.

229 6.7.1.2 All dental facilities using any type of x-ray equipment for dental x-ray imaging, shall:

Commented [JSJ8]:
 Language added for clarity and consistency with other rule sections.

Commented [JSJ9]:
 Language added for clarity and consistency with other rule sections.

CODE OF COLORADO REGULATIONS
Hazardous Materials and Waste Management Division

6 CCR 1007-1 Part 06

- 230 (1) Follow the applicable requirements of 6.3 and 6.4;
- 231 (2) Follow the applicable requirements of this Section 6.7
- 232 6.7.1.3 In addition to the requirements of 6.7.1.2, dental facilities using cone beam computed
 233 tomography (CBCT) x-ray equipment for dental x-ray imaging, shall also follow the
 234 requirements of Section 6.9 that are applicable to CBCT.
- 235 6.7.1.4 Quality assurance. In addition to the general quality assurance provisions in Section 6.3,
 236 the following requirements apply to a dental facility:
- 237 (1) If using a filmless system, maintain and operate PSP and DDR systems
 238 according to manufacturer specifications, or nationally accepted standards.
- 239 (2) If using film:
- 240 (a) Maintain a light tight darkroom or processor system;
- 241 (b) Use proper safelighting and safeguards; and
- 242 (c) Evaluate darkroom or processor system integrity and daylight loading
 243 systems for film fog every six months and after a change that may impact
 244 film fog.
- 245 ~~6.7.1.5~~ Each individual who operates a dental x-ray imaging system shall meet the applicable
 246 adequate radiation safety training and experience requirements of **Part 2, sections** 2.6.1,
 247 ~~in particular and specifically~~ 2.6.1.11.
- 248 (1) Records of training shall be maintained for inspection by the Department in
 249 accordance with Part 2, Section 2.6.6.4.
- 250 * * *
- 251
- 252 (3) Field Limitation for Intraoral Dental X-ray Systems.
- 253 (a) Each x-ray imaging system designed for use with an intraoral image
 254 receptor shall be provided with means to limit the beam such that:
- 255 (i) If the minimum SSD is 18 cm or more, the x-ray field, at the
 256 minimum SSD, shall be containable in a circle having a diameter
 257 of no more than 7 cm; and
- 258 (ii) If the minimum SSD is less than 18 cm, the x-ray field, at the
 259 minimum SSD, shall be containable in a circle having a diameter
 260 of no more than 6 cm.
- 261 ~~(b) Excluding hand-held units, endodontic procedures, and those~~
 262 ~~procedures which require a broader exposure field, after January 1,~~
 263 ~~2025, only rectangular collimators shall be used for routine intraoral~~
 264 ~~dental imaging.~~
- 265 * * *
- 266
- 267 6.7.3 Each dental x-ray imaging system shall meet the following radiation exposure operational control
 268 requirements.

Commented [JSJ10]:

Existing language is amended for clarity. The header information in 2.6.1 and 2.6.1.1 provide broad generic requirements applicable to all operators. Provision 2.6.1.11 is specific to dental use.

Commented [JSJ11]:

This provision was originally adopted in November 2019, with a future effective date of January 2025. The future date was intended to allow for additional data gathering by the department and to give facilities time to budget and purchase equipment that would allow them to come into compliance. Following additional review and evaluation by the department, we are proposing to strike this provision from the rule for reasons discussed below.

In 2022, the department sent a survey to dental facilities to evaluate barriers to implementation of the collimator requirement. Facilities identified concerns over possible imaging errors and the need for additional staff training (which was identified during the original rulemaking). Facilities also identified equipment availability associated with supply chain issues as a concern. This did not appear to be a problem during the initial rulemaking.

While the use of rectangular collimators for patient dose reduction is supported by research and is recommended by the American Dental Association (ADA) and the National Council on Radiation Protection (NCRP) and other entities, the department feels that retaining this requirement is no longer feasible. A number of companies that previously manufactured rectangular collimators have discontinued distributing them. Being aware of this equipment shortage, a Colorado based company approached the department with a possible plan to manufacture and sell rectangular collimators. After additional consultation with the U.S. Food and Drug Administration (FDA), it was determined that this would be challenging as collimators are considered part of the x-ray device that must be individually approved (by FDA) for each machine make and model. Further, the FDA indicated that machines would require recertification by a qualified inspector resulting in additional facility costs.

The unavailability of rectangular collimator equipment in the market along with additional unexpected recertification costs was not anticipated during the original rulemaking. Due to these challenges, the department proposes that the provision be removed from the rule.

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- 269 6.7.3.1 Cephalometric and volumetric beam dental x-ray systems shall meet the radiation
 270 exposure control requirements of 6.6.3:
- 271 6.7.3.2 Intraoral and panoramic dental x-ray systems shall meet the following radiation exposure
 272 control requirements:
- 273 (1) Timers.
- 274 (a) Means shall be provided to terminate the exposure at a preset time
 275 interval, preset product of current and time, a preset number of pulses, or
 276 a preset radiation exposure to the image receptor.
- 277 (b) It shall not be possible to make an exposure when the timer is set to a
 278 "zero" or "off" position if either position is provided.
- 279 (c) Termination of exposure shall cause automatic resetting of the timer to
 280 its initial setting or to "zero".
- 281 (d) Timer Reproducibility.
- 282 (i) With a timer setting of 0.5 seconds or less, the average exposure
 283 period (T_{avg}) shall be greater than or equal to five (5) times the
 284 maximum exposure period (T_{max}) minus the minimum exposure
 285 period (T_{min}) when four (4) timer tests are performed: $T_{avg} \geq$
 286 $5(T_{max} - T_{min})$.
- 287 (2) X-ray Control for Intraoral or Panoramic Dental X-ray Systems.
- 288 (a) Means shall be provided to initiate the radiation exposure by a deliberate
 289 action on the part of the operator, such as the depression of a switch.
 290 Radiation exposure shall not be initiated without such an action.
- 291 (b) A control shall be incorporated into each x-ray imaging system such that
 292 an exposure can be terminated by the operator at any time, except for
 293 exposures of one-half (0.5) second or less.
- 294 (c) Exposure control location and operator protection.
- 295 Except for units designed to be hand-held during operation, the exposure
 296 control shall allow the operator to be:
- 297 (i) Behind a protective barrier at least 2 meters (more than 6 feet)
 298 tall; or
- 299 (ii) At least 2 meters (more than 6 feet) from the patient, x-ray tube,
 300 and the useful beam, while making exposures.
- 301 (d) The requirements of Appendix 6E shall be followed for x-ray equipment
 302 intended to be hand held during operation.
- 303 * * *
- 304
- 305 **6.8 Requirements for use of a veterinary medicine imaging system.**
- 306 6.8.1 Administrative Controls.

Commented [JSJ12]:

This is not a new provision. The provision was an unnumbered paragraph below (2)(c)(ii) but is better determined to be a stand alone provision. There are no changes to requirements as a result of this formatting change.

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6.8.1.1 In addition to the provisions of 6.3 and 6.4, the requirements of this 6.8, and as appropriate also 6.5 and 6.9, apply to equipment and associated facilities used for veterinary x-ray imaging.

6.8.1.2 Each individual who operates a veterinary x-ray imaging system shall meet the applicable adequate radiation safety training and experience requirements of ~~Part 2.6.1, in particular 2.6.1.12~~ **Part 2, sections 2.6.1 and specifically 2.6.1.13.**

* * *

6.9 Requirements for use of computed tomography (CT) imaging systems.

* * *

6.9.3.5 PET CT and SPECT CT Systems

CT systems solely used for localization and calculation of attenuation coefficients in nuclear medicine studies shall meet the requirements in Sections 6.9.1, 6.9.2.4, 6.9.3.1, 6.9.3.3, and 6.9.4.1 unless otherwise exempted below:

(1) In lieu of 6.9.4.2, a RMP shall complete a ~~performance~~**certification** evaluation on the CT system following nationally recognized guidelines or those of the manufacturer at intervals not to exceed 12 months.

* * *

6.9.3.6 Veterinary CT Systems.

CT systems, including CBCT systems, solely used in non-human imaging shall meet the requirements of 6.9.4.1(1) (area radiation surveys) and are otherwise exempt from the standards of Section 6.9.

6.9.3.7 Cone Beam Computed Tomography Systems.

(1) CBCT facilities shall meet the following requirements, as applicable:

(a) Excluding veterinary imaging systems the minimum source-skin distance for CBCT imaging systems shall be consistent with the applicable requirements in 21 CFR subchapter J;

(b) 6.4;

(c) 6.6.3.1, 6.6.3.2, 6.6.3.4(1), and 6.8.2.1(4); and

(d) 6.9.1.3, 6.9.2.1, 6.9.2.3, 6.9.3.2, and 6.9.3.8 as applicable.

(2) Beam alignment.

(a) The x-ray field in the plane of the image receptor shall not exceed beyond the edge of the image receptor by more than 2 percent of the SID, when the axis of the x-ray beam is perpendicular to the plane of the image receptor.

(b) In addition, the center of the x-ray field shall be aligned with the center of the image receptor to within 2 percent of the SID.

Commented [JSJ13]:

This provision is updated to clarify wording and correct a cross-reference error due to prior renumbering in Part 2.

Commented [JSJ14]:

For consistency in the rule, the term "certification evaluation" is used.

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(3) A **performancecertification** evaluation shall be performed by, or under the direct supervision of a RMP.

(a) The evaluation shall follow nationally recognized standards and tolerances or those recognized by the Agency.

(b) The evaluation shall be performed in accordance with Part 2, Section 2.5.1.

(c) The facility shall maintain documentation of the established standards and tolerances and **testingcertification evaluation** results.

* * *

CT surveys, **performancecertification** evaluations, routine QC, and operating procedures

6.9.4 Each computed tomography facility shall conduct required surveys, **performancecertification** evaluations, and routine QC.

6.9.4.1 Radiation Protection Evaluations.

(1) An area radiation survey or measurement shall be made by, or under the direct supervision of, a registered medical physicist or QE, to verify and document compliance with Part 4, Section 4.14 and 4.15 under the following conditions:

(a) All CT x-ray systems installed shall have an area radiation survey or measurement completed by, or under the direct supervision of, the RMP or QE within 90 days of installation;

(b) Any change in the facility or equipment that might cause a significant increase in radiation hazard; or

(c) Upon first use of a portable or mobile CT imaging system, consistent with the applicable requirements of 6.3.2.4.-

(d) The registrant shall obtain from the registered medical physicist, a written report of the measurements required by 6.9.4.1, and a copy of the report shall be made available to the Department upon request.

6.9.4.2 CT System performance **testing and certification** evaluations.

(1) The testing of the CT x-ray system shall be performed by, or under the personal supervision of, ~~a registered medical physicist~~ **RMP** who assumes responsibility and signs the final performance **testing and certification** evaluation report.

(2) Evaluation standards and tolerances shall be established by the registered medical physicist and maintained by the facility. The standards and tolerances shall be:

(a) In accordance with protocols published by nationally recognized organizations (for example, AAPM Report 96), unless the registered medical physicist determines that a particular recommendation of such report is not warranted for the clinical tasks for which the equipment will be used;

Commented [JSJ15]:

Similar to other changes in Part 6, the rule is updated to use more consistent terminology for certification evaluations.

Commented [JSJ16]:

Consistent with other changes in the rule, the term certification evaluation is used.

Commented [JSJ17]:

Remove unneeded period.

Commented [JSJ18]:

Consistent with other changes in the rule, the term certification evaluation is used.

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(3) The **certification** evaluation ~~offer~~ a CT x-ray system shall be performed by or under the personal supervision of an RMP in accordance with Part 2, Section 2.5.1. ~~prior to use on human patients and within 90 calendar days of:~~

(a) ~~Initial installation or acceptance testing; or~~

(b) ~~Any change or service that could cause a change in the radiation output (dose indices) or image quality.~~

* * *

6.10 Requirements for use of mammography and other x-ray based breast imaging systems.

6.10.1 Administrative Controls.

6.10.1.1 The requirements of 6.3 and 6.4 apply to all mammography and x-ray based breast imaging equipment and associated facilities.

6.10.1.2 Each facility performing mammography (as defined in Section 6.2) shall:

(1) Use imaging systems that comply with the Mammography Quality Standards Act of ~~1988~~**1998**.

(2) Meet the requirements of Subpart B of 21 CFR 900;

(3) Ensure that 21 CFR 900 quality control and quality assurance standards for maintaining viewing conditions and interpretation of an image are met.

6.10.1.3 Each RMP who conducts a mammography facility and x-ray machine certification evaluation shall meet the requirements of Part 2, Appendix 2I.

6.10.1.4 Each Individual who performs a mammography examination shall meet the ~~adequate radiation safety~~ training and experience requirements of Part 2, Section 2.4.5.4, ~~2.6.1.5 and Appendix 2M~~.

6.11 Use of dual-energy x-ray absorptiometry (DXA) bone densitometry systems.

6.11.1 In addition to the provisions of 6.3 and 6.4, the requirements of 6.11 apply to all facilities using DXA machines.

6.11.2 DXA Systems shall be:

6.11.2.1 Certified by the manufacturer pursuant to the Medical Device Act and Subchapter C – Electronic Product Radiation Control (EPRC) of Chapter V of the Federal Food, Drug and Cosmetic Act;

6.11.2.2 Registered in accordance with Part 2 of these regulations; and

6.11.2.3 At a minimum, maintained and operated in accordance with the manufacturer's specifications

6.11.3 Operator requirements.

6.11.3.1 ~~In addition to the minimum qualifications outlined in 6.3.1.6 of these regulations, operators shall complete training specific to patient positioning and the operation of the~~

Commented [JSJ19]:

Based on stakeholder feedback, language is clarified to refer to Part 2 of the regulations which contain certification evaluation criteria for all machine types, along with specific criteria for certain types of machines.

By deferring to Part 2 for the primary CE criteria, it will avoid potential conflicts between Part 6 and Part 2. Sections 2.5.1.4 and 2.5.1.5 address the certification frequency and requirements following an initial (new CT system) installation versus ongoing, routine, or post repair/maintenance of existing CT systems.

Commented [JSJ20]:

Section 6.10.1 has been adjusted for formatting and alignment of text.

Commented [JSJ21]:

Correction of date to reflect the current/reaffirmed version of MQSA.

Commented [JSJ22]:

This provision is revised in parallel with proposed changes to Part 2 relating to mammography.

Commented [JSJ23]:

Language is revised for clarity.

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6 CCR 1007-1 Part 06

~~DXA-system.~~ Each operator of a bone densitometry machine shall meet the
adequate radiation safety training and experience requirements of Part 2, Section
2.4.5.3, and Part 2, Appendix 2F.

* * *

[END OF RULE – NO FURTHER CHANGES TO PART 6 BEYOND THIS POINT]



COLORADO

Board of Health

Department of Public Health & Environment

Notice of Public Rule-Making Hearing February 21, 2024

NOTICE is hereby given pursuant to the provisions of Section 24-4-103, C.R.S., that the Colorado Board of Health will conduct a public rule-making hearing on February 21, 2024 at 10 a.m. held remotely over [Zoom](#), to consider revisions to 6 CCR 1007-1 Part 2, Radiation Control - Registration of Radiation Machines, Facilities and Services, and Part 6, Radiation Control- X-Ray Imaging in the Healing Arts. The proposed rule has been developed by the Hazardous Materials and Waste Management Division of the Colorado Department of Public Health and Environment pursuant to Sections 25-1.5-101(1)(k), 25-1.5-101(1)(l), 25-11-103, 25-11-104, and 25-1-108, C.R.S.

The agenda for the meeting and the proposed amendments will also be available on the Board's website, <https://cdphe.colorado.gov/board-of-health> at least seven (7) days prior to the meeting. The proposed rules, together with the proposed statement of basis and purpose, specific statutory authority and regulatory analysis will be available for inspection at the Colorado Department of Public Health and Environment, 4300 Cherry Creek Drive South EDO-A5, Denver, Colorado 80246-1530 at least five days prior to the hearing. Copies of the proposed rules may be obtained by contacting the Colorado Department of Public Health and Environment, Hazardous Materials and Waste Management Division, 4300 Cherry Creek Drive S., Denver, CO 80246, 303-692-3454.

The Board encourages all interested persons to participate in the hearing by providing written data, views, or comments. Written testimony is encouraged; oral testimony will be received only to the extent the Board finds it necessary. For those that are permitted to provide oral testimony, the time may be limited to 3 minutes or less. Testimony is limited to the scope of the rulemaking hearing. Pursuant to 6 CCR 1014-8, §3.02.1, written testimony must be submitted no later than five (5) calendar days prior to the rulemaking hearing. Written testimony must be received by 5:00 p.m., Thursday, February 15, 2024. Persons wishing to submit written comments should submit them to: Colorado Board of Health, ATTN: Board of Health Program Assistant, Colorado Department of Public Health and Environment, 4300 Cherry Creek Drive South EDO-A5, Denver, Colorado 80246-1530 or by e-mail at: cdphe.bohrequests@state.co.us

Dated this 4th day of January, 2024.

Ann M. Hause

Digitally signed by Ann
M. Hause
Date: 2024.01.04 13:28:34
-07'00'

Ann Hause
Interim Board of Health Administrator

Notice of Proposed Rulemaking

Tracking number

2024-00025

Department

1000 - Department of Public Health and Environment

Agency

1007 - Hazardous Materials and Waste Management Division

CCR number

6 CCR 1007-2

Rule title

SOLID WASTE SITES AND FACILITIES

Rulemaking Hearing

Date

02/20/2024

Time

09:00 AM

Location

This meeting will be held online only at: <https://us02web.zoom.us/join/zt0ldeyvqDktG9A80u-6CDaKszafa2dunsSD>

Subjects and issues involved

The purpose of these revisions to Section 14 of 6 CCR 1007-2 Part 1 (the Regulations) is to increase food waste diversion opportunities by increasing allowable Type 2 feedstock volumes for Conditionally Exempt Small Quantity facilities, and allowing certain Class I facilities to accept food waste from offsite locations. A standard operator training requirement is included for Class I, II, and III facilities. The requirements for sampling, storage, and use of finished compost and soil amendments have also been updated to be more protective of human health and the environment.

Statutory authority

These modifications are made pursuant to the authority granted to the Solid and Hazardous Waste Commission in Section 30-20-109 C.R.S.

Contact information

Name

Brandy Valdez Murphy

Title

Administrator, Solid and Hazardous Waste Commission

Telephone

303-692-3467

Email

brandy.valdezmurphy@state.co.us



COLORADO

Solid & Hazardous
Waste Commission

Department of Public Health & Environment

NOTICE OF PROPOSED RULEMAKING HEARING BEFORE THE COLORADO SOLID AND HAZARDOUS WASTE COMMISSION

SUBJECT:

For consideration of the amendments to 6 CCR 1007-2, Part 1, Section 14, along with the accompanying Statement of Basis and Purpose, the following will be considered:

Amendment of 6 CCR 1007-2, Part 1, Section 14 - Regulations Pertaining to Solid Waste Sites and Facilities - Composting

These modifications are made pursuant to the authority granted to the Solid and Hazardous Waste Commission in Section 30-20-109 C.R.S.

The purpose of these revisions to Section 14 of 6 CCR 1007-2 Part 1 (the Regulations) is to increase food waste diversion opportunities by increasing allowable Type 2 feedstock volumes for Conditionally Exempt Small Quantity facilities, and allowing certain Class I facilities to accept food waste from offsite locations. A standard operator training requirement is included for Class I, II, and III facilities. The requirements for sampling, storage, and use of finished compost and soil amendments have also been updated to be more protective of human health and the environment.

Any information that is incorporated by reference in these proposed rules is available for review at the Colorado Department of Public Health and Environment, Hazardous Materials and Waste Management Division and any state publications depository library.

Pursuant to C.R.S. §24-4-103(3), a notice of proposed rulemaking was submitted to the Secretary of State on January 12, 2024. Copies of the proposed rulemaking will be mailed to all persons on the Solid and Hazardous Waste Commission's mailing list on or before the date of publication of the notice of proposed rulemaking in the Colorado Register on January 25, 2024.

The proposed rulemaking materials may also be accessed at <https://cdphe.colorado.gov/shwc-rulemaking-hearings>.

WRITTEN TESTIMONY

Any alternative proposals for rules or written comments relating to the proposed amendment of the regulation will be considered. The Solid and Hazardous Waste Commission will accept written testimony and materials regarding the proposed alternatives. **The commission strongly encourages interested parties to submit written testimony or materials to the**



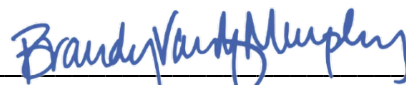
Solid and Hazardous Waste Commission Office, via email to cdphe.hwcrequests@state.co.us by Wednesday, February 7, 2024, at 11:59 p.m. Written materials submitted in advance will be distributed to the commission members prior to the day of the hearing. Submittal of written testimony and materials on the day of the hearing will be accepted, but is strongly discouraged.

HEARING SCHEDULE:

DATE: Tuesday, February 20, 2024
TIME: 9:00 a.m.
PLACE: This meeting will be held online only at:

<https://us02web.zoom.us/join/zt0ldyvvqDktG9A80u-6CDaKszafa2dunsSD>

Oral testimony at the hearing regarding the proposed amendments may be limited.



Brandy Valdez Murphy, Administrator



1 DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

2
3
4
5 **Solid and Hazardous Waste Commission/Hazardous Materials and**
6 **Waste Management Division**

7
8
9 6 CCR 1007-2

10
11
12 **PART 1 REGULATIONS PERTAINING TO SOLID WASTE SITES AND FACILITIES**

13
14
15 **Section 14 Composting Regulations Amendments**

16
17
18 **1) Section 14.1.4 (Conditional Exemptions) is being amended by revising paragraph (A)**
19 **to read as follows:**

20
21 **SECTION 14.1 GENERAL PROVISIONS**

22 *****

23
24
25 **14.1.4 Conditional Exemptions**

26
27 (A) Conditionally Exempt Small Quantity Composting Operations: Any composting facility with up
28 to: (1) 100 cubic yards of Type 1 feedstock onsite or in process; (2) 100 cubic yards of Type 1
29 feedstock and up to 205 cubic yards of Type 2 feedstock onsite or in process; ~~or (3) 100 cubic~~
30 ~~yards of Type 1 and up to 10 cubic yards of Type 2 feedstock on site or in process when~~
31 ~~composted in vessel~~; that complies with the following conditions is exempt from the balance of
32 this Section 14:

33 *****

34
35 *****

36
37
38
39 **2) Section 14.1.5 (Compliance Schedule) is being amended by revising paragraphs (A)**
40 **and (B) and deleting paragraph (C) to read as follows:**

41
42 **SECTION 14.1 GENERAL PROVISIONS**

43 *****

14.1.5 Compliance Schedule

(A) ~~Class II and Class III composting facilities that do not have an EDOP approved after the November 18, 2008 revisions of this Section 14, Solid Waste Composting Regulations, must submit to the Department and the local governing authority, for review and approval, a revised EDOP within eighteen (18) months of the effective date of this Section 14. Within twelve (12) months of the effective date of these Section 14 amendments, all facilities must comply with the certified compost operator training as specified in Sections 14.2.4(K)(1), 14.3.5(K)(1), and 14.4.5(K)(1), as applicable.~~

(B) ~~Within six (6) months of the effective date of this Section 14, facilities that cannot meet the compliance schedule specified in 14.1.5(A) must make a demonstration to the Department showing why this compliance schedule cannot be met, and must request an alternate schedule for coming into compliance with this Section 14. Such extension shall be subject to Department approval, but the deadline for coming into compliance may be extended no longer than eighteen (18) months after the effective date of this Section 14. The requirement to sample for both biological constituents in Section 14.6(D) must begin immediately. Facilities with an EDOP must update their sampling plans to reflect this change within twelve (12) months of the effective date of this Section 14.~~

(C) ~~Within twelve (12) months of the effective date of this Section 14, any Class I composting facility must have onsite a completed Composting Plan that complies with Section 14.2.~~

3) Section 14.2.1 (Scope and Applicability) is being amended by revising paragraph (B), renumbering the existing paragraph (C) as paragraph (D), and adding a new paragraph (C) to read as follows:

SECTION 14.2 - CLASS I COMPOSTING FACILITIES

14.2.1 Scope and Applicability

Section 14.2 applies to any persons, local governing authorities, and municipalities who owns or operates a Class I composting facility. A Class I composting facility is a facility that:

(A) Composts only Type 1 feedstocks, and who has less than 50,000 cubic yards of feedstocks and in-process material onsite at any one time (finished compost does not count toward this total); or

(B) ~~Composts Type 1 feedstocks, food residuals and food processing vegetative waste, and has no more than 5,000 cubic yards of feedstocks and in-process materials onsite at any one time; or Composts only source separated organics and/or food residuals generated onsite together with other compatible materials as defined in Section 1 of these regulations, with the following limits:~~

~~1. A total volume of no greater than 5,000 cubic yards of source separated organics onsite at any one time (finished qualified product does not count toward this total); and~~

2. ~~A composting area of two (2) acres in size or less; or~~

(C) Composts on agriculturally zoned property using only agricultural waste generated onsite together with Type 1 materials, food residuals and food processing vegetative waste, together with other compatible materials as defined in Section 1 of these regulations, with the following limits:

(1) A total volume of no greater than 5,000 cubic yards of source separated organics onsite at any one time (finished qualified product does not count toward this total); and

(2) A composting area of two (2) acres in size or less; or

~~(CD)~~ Composts at the site of generation or on agriculturally zoned property owned by the generator using only agricultural waste generated onsite together with other compatible materials as defined in Section 1 of these regulations and does not meet one of the general exemptions or conditional exemptions in Sections 14.1.3 or 14.1.4.

4) Section 14.2.3 (Class I Composting Facility Design Requirements) is being amended by revising paragraphs (A)(2)(b)- (A)(2)(e) and paragraph (B) to read as follows:

SECTION 14.2 - CLASS I COMPOSTING FACILITIES

14.2.3 Class I Composting Facility Design Requirements

(A) **Surface Water Control:** The Composting Plan for Class I composting facility must describe how the surface water control system features of the facility will be designed, constructed and maintained:

(1) Prevent negative impacts to surface water and groundwater;

(2) Control surface water, including:

(a) stormwater run on and run off control features with a slope of one (1) to six (6) percent, or meeting other design criteria as approved by the department;

(b) features to ~~contain and~~ manage contact water, which may include a vegetated area as long as it is of sufficient size and slope to prevent erosion and completely contain any discharge of contact water;

(c) engineered features to prevent contact water from negatively impacting groundwater, as determined by a Colorado licensed professional engineer or a professional geologist;

(d) engineered features to prevent ponding of stormwater and contact water within the composting process area;

(e) engineered contact water ~~and~~ stormwater containment structures with a minimum of 2 feet of freeboard measured from the lowest elevation at any given time.

(B) **Surface Water Control for Class I Composting Facilities Composting Manure, Animal Mortalities and/or ~~Source Separated Organics~~Animal Materials:** In addition to the surface water management requirements in 14.2.3(A), the owner/operator of a Class I composting facility composting manure, animal mortalities and/or ~~source separated organics~~animal materials must design, construct and maintain stormwater and contact water controls that meet the following requirements:

5) Section 14.2.4 (Class I Composting Facility Operational Requirements) is being amended by revising paragraphs (C) and (K) to read as follows:

SECTION 14.2 - CLASS I COMPOSTING FACILITIES

14.2.4 Class I Composting Facility Operational Requirements

The owner/operator of a Class I composting facility must operate the facility in accordance with their Department-approved registration, with their Composting Plan, and with the following operational requirements:

(C) **Material Acceptance:** The owner/operator of a Class I composting facility may only accept Type 1 and Type 2 feedstocks, ~~or other compatible materials if the composting facility is operating as~~ allowed under the provisions of Section 14.2.1(B) ~~or Section 14.2.1(C)~~ and as specified in the approved registration.

(K) **Personnel Training:** Class I composting facilities must operate under the control of properly trained individuals. Personnel must be trained to recognize prohibited materials, take action when nuisance conditions occur, and implement emergency procedures when necessary. Each Class I compost facility operating under Section 14.2.1(B) and 14.2.1(C) must have at least one operator that has completed the following training:

(1) **Certified operator training:** Completion of a nationally recognized or equivalent training on compost facility operations. A facility shall go no longer than twelve (12) months without having an operator on staff that has completed this training.

6) Section 14.3.4 (Class II Composting Facility Design and Operations Plan: Design) is being amended by revising paragraph (B)(5) to read as follows:

14.3.4 Class II Composting Facility Design and Operations Plan: Design

(B) **Feedstock Processing Areas:** The EDOP for a Class II composting facility must describe how the areas where all mixing, tipping and composting occur will be designed and constructed to:

(5) The Department may require a low permeability workpad area to manage contact water generated from composting operations. Site-specific conditions, operational practices, feedstock, bulking material and liquid wastes will be evaluated to determine the necessity for a low ~~permability-permeability~~ workpad and low ~~permability-permeability~~ liquid mixing pad/basin.

7) Section 14.3.5 (Class II Composting Facility Design and Operations Plan: Operations) is being amended by revising paragraphs (B) - Financial Assurance and (K) - Personnel Training to read as follows:

SECTION 14.3 - CLASS II COMPOSTING FACILITIES

14.3.5 Class II Composting Facility Design and Operations Plan: Operations

Class II composting facilities must comply with their Department-approved EDOP. The EDOP must include the following operation requirements:

(B) **Financial Assurance:** ~~The EDOP for a~~ Class II composting facility must ~~include~~have current financial assurance estimates in accordance with Section 4 of these Solid Waste Regulations. A Class II composting facility must maintain adequate financial assurance in accordance with its EDOP and with Section 4 of these Solid Waste Regulations.

(K) **Personnel Training:** A Class II composting facility must operate under the control of properly trained individuals. Personnel must be trained to recognize prohibited materials, take action when nuisance conditions occur, and implement emergency procedures when necessary. The EDOP for a Class II composting facility must describe how the facility will comply with these requirements. Each Class II compost facility must have at least one operator that has completed the following training:

(1) **Certified operator training:** Completion of a nationally recognized or equivalent training on compost facility operations. A facility shall go no longer than twelve (12) months without having an operator on staff that has completed this training.

8) Section 14.4.4 (Class III Composting Facility Design and Operations Plan: Design) is being amended by revising paragraph (B)(5) to read as follows:

14.4.4 Class III Composting Facility Design and Operations Plan: Design

(B) Feedstock Processing Areas: The EDOP for a Class III composting facility must describe how the areas where all mixing, tipping and composting occur will be designed and constructed to:

(5) The Department may require a low permeability workpad area to manage contact water generated from composting operations. Site-specific conditions, operational practices, feedstock, bulking material and liquid wastes will be evaluated to determine the necessity for a low permeability workpad and low ~~permability~~permeability liquid mixing pad/basin.

9) Section 14.4.5 (Class III Composting Facility Design and Operations Plan: Operations) is being amended by revising paragraphs (B) - Financial Assurance and (K) - Personnel Training to read as follows:

SECTION 14.4 - CLASS III COMPOSTING FACILITIES

14.4.5 Class III Composting Facility Design and Operations Plan: Operations

Class III composting facilities must comply with their Department-approved EDOP. The EDOP must include the following operation requirements:

(B) Financial Assurance: ~~The EDOP for a~~ Class III composting facility must ~~include~~have current financial assurance estimates in accordance with Section 4 of these Solid Waste Regulations. A Class III composting facility must maintain adequate financial assurance in accordance with its EDOP and with Section 4 of these Solid Waste Regulations.

(K) **Personnel Training:** A Class III composting facility must operate under the control of properly trained individuals. Personnel must be trained to recognize prohibited materials, take action when nuisance conditions occur, and implement emergency procedures when necessary. The EDOP for a Class III composting facility must describe how the facility will comply with these requirements. Each Class III compost facility must have at least one operator that has completed the following training:

(1) **Certified operator training:** Completion of a nationally recognized or equivalent training on compost facility operations. A facility shall go no longer than twelve (12) months without having an operator on staff that has completed this training.

10) Section 14.6 (Sampling of Finished Compost and Soils Amendments) is being amended by revising paragraphs (D) and (J) and adding a new paragraph (K) to read as follows:

14.6 – SAMPLING OF FINISHED COMPOST AND SOILS AMENDMENTS

(D) The owner or operator of a composting facility must ensure that:

(1) The density of the fecal coliform present in the compost is less than 1000 Most Probable Number per gram of total solids (dry weight basis); ~~or~~ and

(2) The density of Salmonella sp. bacteria in the compost is less than three (3) Most Probable Number per four (4) grams of total solids (dry weight basis) at the time the compost is to be sold or otherwise distributed for use; or

(3) An owner/operator of a composting facility may receive an approval from the Department and local governing authority for alternate testing after demonstrating how the alternative testing is protective of human health and the environment.

(J) **Unrestricted Use:** Compost that satisfies the levels specified in Table 1 and all other parameters identified by the Department per Section 14.6 is determined by these criteria to be finished compost and acceptable for unrestricted use. The finished compost is considered to be a product not a waste, and is no longer subject to these Solid Waste Regulations, except that storage of finished compost may only occur in designated areas identified in a facility's operations plan. For those additional constituents identified by the Department under Section 14.6 and not found on Table 1, the Department will approve protective unrestricted use constituent concentrations.

(K) **Soil amendments approved in accordance with Section 14.6(C) must meet the Department approved criteria at the time of distribution. Storage of soil amendments that do not meet the unrestricted use criteria must be stored in a manner that is protective of human health and the environment and in accordance with the facility's operations plan. Storage of liquid soil amendments**

339 on the ground is subject to Section 9 of these regulations. The Department may require additional
340 engineering controls for soil amendments.

1 **DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT**

2

3

4 **Solid and Hazardous Waste Commission**

5 **Hazardous Materials and Waste Management Division**

6 **6 CCR 1007-2**

7

8 **STATEMENT OF BASIS AND PURPOSE**

9 **AND SPECIFIC STATUTORY AUTHORITY FOR**

10

11 Amendment to the Regulations Pertaining to Solid Waste Sites and Facilities (6 CCR 1007-

12 2, Part 1) – Section 14.

13

14 **Basis and Purpose**

15

16 I. Statutory Authority

17

18 Section 30-20-109 C.R.S. gives the Solid and Hazardous Waste Commission (the

19 Commission) the authority to promulgate solid waste regulations in order to implement and

20 enforce Section 30, Article 20, Part 1, C.R.S. In addition, Section 30- 20-109(2)(d) gives the

21 Commission the authority to establish criteria by rule as to when a certificate of designation is

22 not required for composting site and facilities.

23

24 II. Purpose of revised regulations:

25

26 The purpose of these revisions to Section 14 of 6 CCR 1007-2 Part 1 (the Regulations) is to

27 increase food waste diversion opportunities by increasing allowable Type 2 feedstock volumes

28 for Conditionally Exempt Small Quantity facilities, and allowing certain Class I facilities to

29 accept food waste from offsite locations. A standard operator training requirement is included

30 for Class I, II, and III facilities. The requirements for sampling, storage, and use of finished

31 compost and soil amendments have also been updated to be more protective of human health

32 and the environment.

33

34 **Discussion of Regulatory Proposal**

35

36 In Section 14.1.4(A) the volume of Type 2 feedstocks for Conditionally Exempt Small Quantity

37 Composting Operations is increasing to 20 cubic yards, and the distinction for in-vessel

38 composting is being removed.

In Section 14.1.5 the existing compliance schedule is being replaced to reflect the changes proposed by this revision. Compliance is required within twelve months of the effective date of this revision for the operator training requirements in Sections 14.2.4(K)(1), 14.3.5(K)(1), and 14.4.5(K)(1). Additionally, facilities with an EDOP must update their sampling plans to reflect the changes within 14.6(D) within 12 months of the effective date of this revision.

In Section 14.2.1, which applies to Class I Compost Facilities, the following changes are being proposed:

14.2.1(B)

Under the proposed revisions, a Class I compost facility may accept up to 5,000 cubic yards of Type 1 feedstocks, food residuals and food processing vegetative waste from offsite sources. Previously, this facility type could only process food waste that was generated onsite.

14.2.1(C)

This section is being modified to include as a Class I compost facility any agriculturally zoned compost facility that accepts Type 1 feedstocks, food residuals and food processing vegetative waste from offsite, and composts them together with agricultural materials generated onsite. This facility can have no more than 5,000 cubic yards of source separated organics onsite and in-process at any given time, and must be composted in an area of two acres or less.

14.2.1(D)

The section pertaining to an agriculturally zoned composting operation, formerly in 14.2.1(C), has moved here.

Section 14.2.3 addresses Class I Composting Facility Design Requirements. Under the proposed changes, surface water controls 14.2.3(A)(2)(b) have been modified to allow for alternate contact water management systems, and clarifications in sections 14.2.3(A)(2)(c), 14.2.3(A)(2)(d), and 14.2.3(A)(2)(e) have been made as to which features are considered engineered. Subsection 14.2.3(B) has been modified to only apply to facilities accepting manure, mortalities, and animal materials. These changes are intended to allow for more diverse management of contact water, while still being protective of ground and surface water.

Section 14.2.4(C) has been changed to allow certain Class I composting facilities to accept Type 2 feedstocks, which corresponds to the addition of food residuals and food processing vegetative waste to the list of acceptable materials for facilities under 14.2.1(B) and 14.2.1(C).

Section 14.2.4(K), which covers personnel training, now requires that the new operations allowed under Section 14.2.1(B) and 14.2.1(C) have a certified operator. This modification is important to ensure operators are familiar with the various technical requirements for properly operating a composting facility. Proper training will help prepare operators respond to issues in a timely and effective manner, which will ensure better protection of human health and the environment.

In Section 14.3.5(B) (Financial Assurance) the language has been changed so that Class II composting facilities are not required to include financial assurance cost estimates in the EDOP, and can instead be submitted under separate cover. Cost estimates are not typically required until the closure plan, a component of the EDOP, has been approved. Because of this, it is preferred that they not be included within the EDOP.

Section 14.3.5(K) (Personnel Training) requires that all Class II operations have a certified operator.

In Section 14.4.5(B) (Financial Assurance) the language has been changed so that Class III composting facilities are not required to include financial assurance cost estimates in the EDOP, and can instead be submitted under separated cover.

Section 14.4.5(K) (Personnel Training) requires that all Class III operations have a certified operator.

The Section 14.6 (Sampling of Finished Compost and Soils Amendments) are as follows:

14.6(D) – Finished compost must now be sampled for both fecal coliform and Salmonella. Sampling has revealed that some compost may pass one of the indicators, but fail for the other. Testing for both standard pathogens ensures that the material has been properly and effectively composted and will ensure the protection of human health and the environment.

14.6(J) – Finished compost may only be stored in areas identified in the facility's operations plan. This ensures that finished compost is not potentially being stored in a manner where it might be contaminated by unprocessed or unfinished materials.

14.6(K) – Soil amendments may not be distributed without meeting Section 14.6(C) requirements, and if they have not met unrestricted use criteria, they must be stored in a manner that is protective of human health and the environment and complies with facility operations plans. Liquid soil amendment storage on the ground is subject to Section 9 of the regulations, which applies to liquid storage of solid waste. Additional engineering controls may be required by the Department.

Issues Encountered During Stakeholder Process:

A virtual stakeholder meeting was held on September 25, 2023 to discuss the proposed regulations. No issues were encountered during the stakeholder process.

Regulatory Alternatives

No other regulatory alternatives were evaluated.

Cost/Benefit Analysis

A cost-benefit analysis will be performed if requested by the Colorado Department of Regulatory Agencies.

Notice of Proposed Rulemaking

Tracking number

2024-00024

Department

1000 - Department of Public Health and Environment

Agency

1007 - Hazardous Materials and Waste Management Division

CCR number

6 CCR 1007-2 Part 1

Rule title

SOLID WASTE SITES AND FACILITIES

Rulemaking Hearing

Date

02/20/2024

Time

09:00 AM

Location

This meeting will be held online only at: <https://us02web.zoom.us/join/9tZ0ldeyvqDktG9A80u-6CDaKszafa2dunsSD>

Subjects and issues involved

The Solid Waste and Materials Management Program is expected to experience a budget shortfall in the solid waste management fund in fiscal year 2024 and the fee increase is needed to help prevent a budget shortfall for the program in fiscal year 2025. The purpose of these revisions to Section 1.7.4 of 6 CCR 1007-2 Part 1 (the Regulations) is to increase the solid waste management funds portion of the solid waste user fee authorized in Section 25-16-104.5(1.7)(a)(I) C.R.S. from \$0.13 per cubic yard to \$0.22 per cubic yard for one year beginning on July 1, 2024. Beginning on July 1, 2025, the solid waste management funds portion will decrease to \$0.17 per cubic yard. During the one-year period from July 1, 2024 to June 30, 2025, the Hazardous Substance Response Funds portion of the solid waste user fee will drop from \$0.05 per cubic yard to \$0.00.

Statutory authority

These modifications are made pursuant to the authority granted to the Solid and Hazardous Waste Commission in Section 25-16-104.5(1.7)(a) C.R.S. and Section 25-16-104.5(1.7)(a)(I) C.R.S.

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DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Solid and Hazardous Waste Commission/Hazardous Materials
and
Waste Management Division

6 CCR 1007-2

PART 1 REGULATIONS PERTAINING TO SOLID WASTE SITES AND FACILITIES

Section 1.7.4 Solid Waste User Fee Amendments

1) Section 1.7.4 (Solid Waste User Fee) is being amended by revising paragraph (A) to read as follows:

1.7 SOLID WASTE AUTHORIZATION AND FEES

1.7.4 Solid Waste User Fee

- A. ~~Beginning July 1, 2012~~ From July 1, 2024 to June 30, 2025, the operator of each attended solid waste disposal site shall, at the time of disposal, collect a solid waste user fee from waste producers or other persons disposing of solid waste at the following rates:

	Solid Waste User Fee	Cubic Yard Rate	Ton Rate
1) Thirteen cents (\$0.13) <u>Twenty-two cents (\$0.22)</u> per cubic yard or forty-three cents (\$0.43) <u>seventy-three cents (\$0.73)</u> per ton on each load transported into the solid waste disposal site for disposal by any vehicle, or an equivalent amount determined using the conversion factors in subsection 1.7.4(A)(4) to support the costs described in § 25-16-104.5(1.7)(a)(I), C.R.S.;	Solid Waste Program § 25-16-104.5(1.7)(a)(I)	\$0.13 <u>\$0.22</u>	\$0.43 <u>\$0.73</u>
2) Five cents (\$0.05) <u>Zero cents (\$0.00)</u> per cubic yard or seventeen cents (\$0.17) <u>zero cents (\$0.00)</u> per ton on each load transported into the solid	Hazardous Substance Response Fund § 25-16-104.5(1.7)(a)(II)	\$0.05 <u>\$0.00</u>	\$0.17 <u>\$0.00</u>

waste disposal site for disposal by any vehicle, or an equivalent amount determined using the conversion factors in subsection 1.7.4(A)(4) to support the costs described in § 25-16-104.5(1.7)(a)(II), C.R.S.; and	Department of Law § 25-16-104.5(1.7)(a)(III)	\$0.03	\$0.10
3) Three cents (\$0.03) per cubic yard or ten cents (\$0.10) per ton on each load transported into the solid waste disposal site for disposal by any vehicle, or an equivalent amount determined using the conversion factors in subsection 1.7.4(A)(4) to support the costs described in § 25-16-104.5(1.7)(a)(III), C.R.S.	Total SWUF Note: Does not include RREO fee as defined in § 25-16-104.5(3.9)	\$0.21 \$0.25	\$.70 \$0.83

A. Beginning July 1, 2025 the operator of each attended solid waste disposal site shall, at the time of disposal, collect a solid waste user fee from waste producers or other persons disposing of solid waste at the following rates:

	<u>Solid Waste User Fee</u>	<u>Cubic Yard Rate</u>	<u>Ton Rate</u>
1) <u>Seventeen cents (\$0.17) per cubic yard or fifty-seven cents (\$0.57) per ton on each load transported into the solid waste disposal site for disposal by any vehicle, or an equivalent amount determined using the conversion factors in subsection 1.7.4(A)(4) to support the costs described in § 25-16-104.5(1.7)(a)(I), C.R.S.;</u>	<u>Solid Waste Program</u> § 25-16-104.5(1.7)(a)(I)	<u>\$0.17</u>	<u>\$0.57</u>
2) <u>Five cents (\$0.05) per cubic yard or seventeen cents (\$0.17) per ton on each load transported into the solid waste disposal site for disposal by any vehicle, or an equivalent amount determined using the conversion factors in subsection 1.7.4(A)(4) to support the costs described in § 25-16-104.5(1.7)(a)(II), C.R.S.; and</u>	<u>Hazardous Substance Response Fund</u> § 25-16-104.5(1.7)(a)(II)	<u>\$0.05</u>	<u>\$0.17</u>
	<u>Department of Law</u> § 25-16-104.5(1.7)(a)(III)	<u>\$0.03</u>	<u>\$0.10</u>
3) <u>Three cents (\$0.03) per cubic yard or ten cents (\$0.10) per ton on each load transported into the solid waste disposal site for disposal by any vehicle, or an equivalent amount determined using the conversion</u>	<u>Total SWUF</u> Note: Does not include RREO fee as defined in § 25-16-104.5(3.9)	<u>\$0.25</u>	<u>\$.83</u>

factors in subsection 1.7.4(A)(4) to support the costs described in § 25-16-104.5(1.7)(a)(III), C.R.S.

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4) Conversion factors: Any solid waste disposal facility or jurisdiction may use the following conversion factors when calculating Solid Waste User Fees :

- a. 0.333 cubic yards/passenger car
- b. 0.666 cubic yards/light duty truck/suv
- c. 3.333 cubic yards/ton for municipal solid waste
- d. 5.000 cubic yards/1,000 gallons
- e. 0.75 cubic yards/ton for soil

A facility may request that the Department approve an alternate conversion rate, based on the material specific density for a given waste stream. This request must include data that validates the density of the material.

1.7.5 Reserved

1 **DEPARTMENT OF PUBLIC HEALTH**
2 **AND ENVIRONMENT**
3
4

5 **Solid and Hazardous Waste Commission**
6 **Hazardous Materials and Waste Management**
7 **Division**
8 **6 CCR 1007-2**
9

10 **STATEMENT OF BASIS AND**
11 **PURPOSE AND SPECIFIC**
12 **STATUTORY AUTHORITY FOR**
13

14 Amendment to the Regulations Pertaining to Solid Waste Sites and
15 Facilities (6 CCR 1007-2, Part 1) – Section 1.7.4, Solid Waste User Fee
16

17 **Basis and Purpose**
18

19 I. **Statutory Authority**
20

21 Section 25-16-104.5(1.7)(a) C.R.S. and Section 25-16-104.5(1.7)(a)(I)
22 C.R.S. authorizes the Solid and Hazardous Waste Commission (the
23 Commission) to promulgate rules to establish the solid waste user fee to
24 cover the Colorado Department of Public Health and Environment's costs
25 to implement the solid waste management program under Section 30-20-
26 101.5, C.R.S.
27

28 II. **Purpose of revised regulations:**
29

30 The Solid Waste and Materials Management Program is expected to
31 experience a budget shortfall in the solid waste management fund in fiscal
32 year 2024 and the fee increase is needed to help prevent a budget shortfall
33 for the program in fiscal year 2025. The purpose of these revisions to
34 Section 1.7.4 of 6 CCR 1007-2 Part 1 (the Regulations) is to increase the
35 solid waste management fund's portion of the solid waste user fee
36 authorized in Section 25-16-104.5(1.7)(a)(I) C.R.S. from \$0.13 per cubic
37 yard to \$0.22 per cubic yard for one year beginning on July 1, 2024.
38 Beginning on July 1, 2025, the solid waste management fund's portion will
39 decrease to \$0.17 per cubic year. During the one year period from July 1,

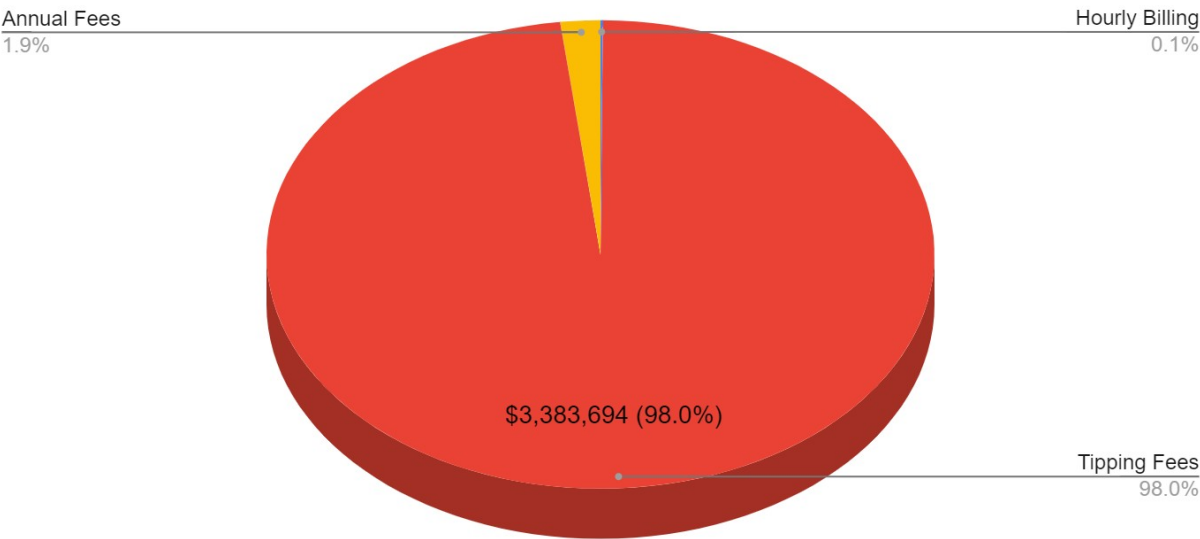
40 2024 to June 30, 2025, the Hazardous Substance Response Fund's portion
41 of the solid waste user fee will drop from \$0.05 per cubic yard to \$0.00.

Discussion of Regulatory Proposal

The Solid Waste and Materials Management Program is funded through the solid waste user fee assessed on the disposal of waste, document review fees, and annual facility fees. With the exception of the general fund money appropriated to the department in HB 23-1194 to fund one full time employee (FTE) to implement the Closed Landfills Remediation Grant Program and a small amount of general fund money appropriated to support 0.4 FTE to implement SB 23-253, Standards For Products Represented as Compostable, the Solid Waste and Materials Management Program is fully funded through fees. The program receives funding through a few different fee types: the solid waste user fee, annual facility fees from solid waste disposal sites and facilities that do not pay the solid waste user fee, the waste tire fee, the paint stewardship fee, and document review fees.

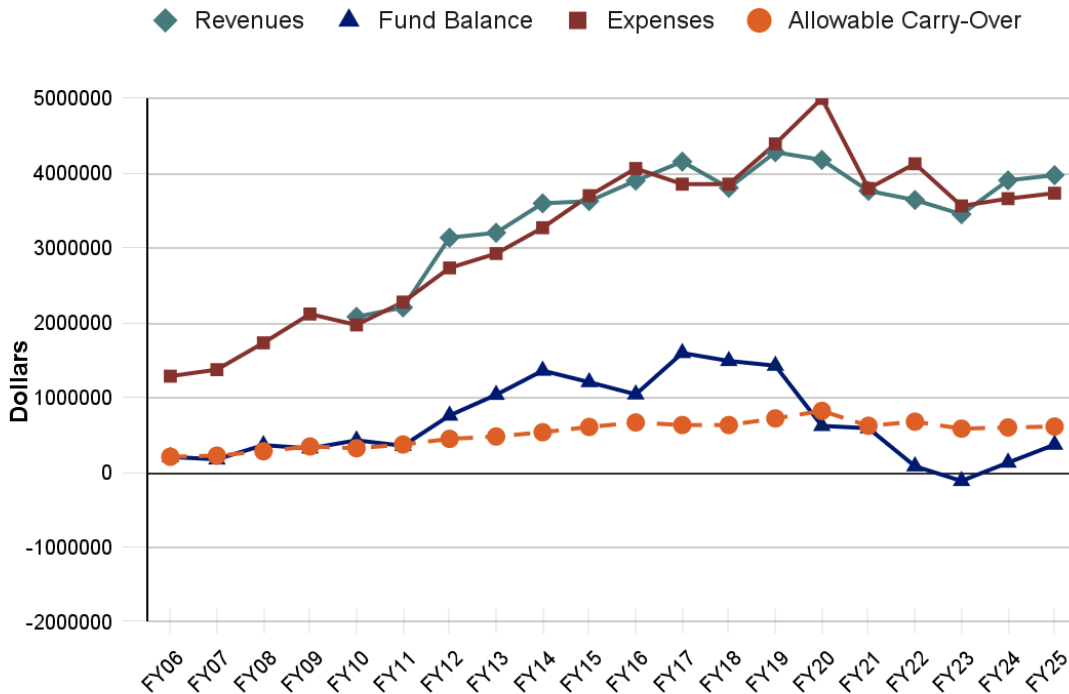
The Solid Waste Program brought in about \$3.5 million in total revenue in Fiscal Year 2022-2023. Ninety-eight percent of the total revenue (i.e., \$3.4 million) was generated by tipping fees.

Solid Waste Program Revenue
Fiscal Year 2022-23



61
62

Solid Waste Management Fund Balance

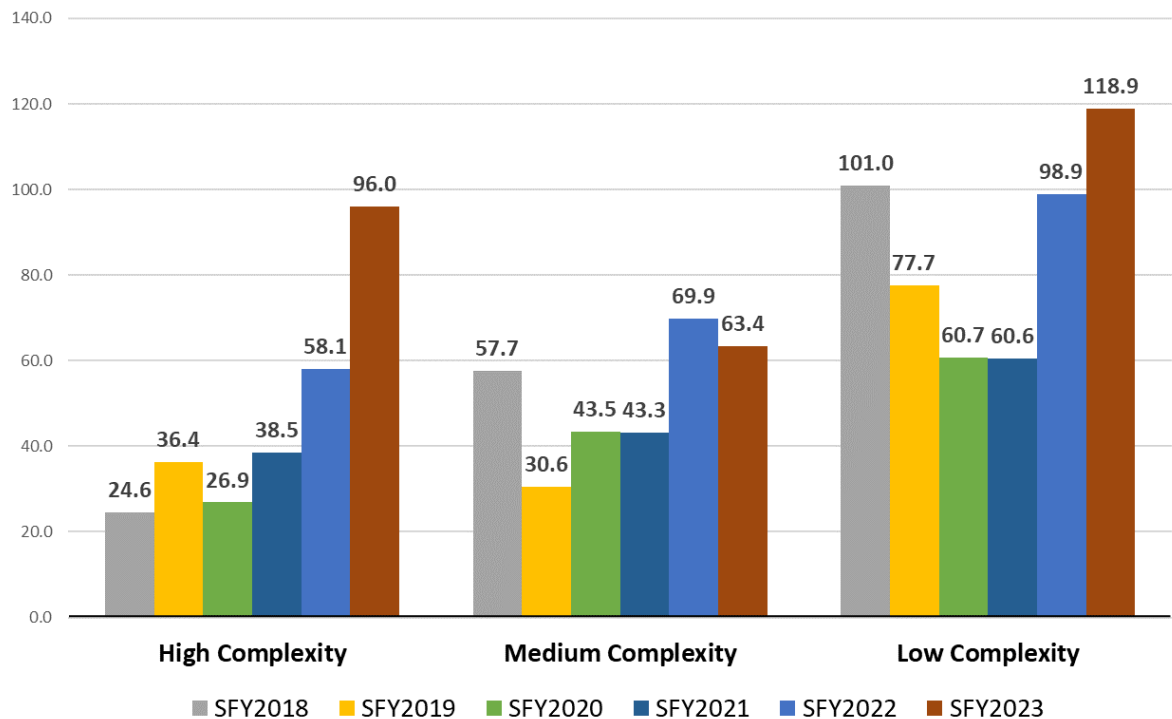


63 The solid waste management fund supports 23 FTE. Twenty FTE are
64 responsible for the implementation of the Regulations Pertaining to Solid
65 Waste Disposal Sites and Facilities, 6 CCR 1007-2 (the solid waste
66 regulations) Part 1 and the Solid Waste Act §§ 30-20-100.5 C.R.S. *et seq.*,
67 at solid waste disposal sites and facilities. Three FTE are dedicated to
68 recycling and waste diversion efforts through data collection and
69 enforcement of the solid waste regulations at recycling facilities. Staff that
70 perform document reviews for solid waste facility designs, groundwater
71 monitoring reports, or other documents submitted for review by solid
72 waste facilities are mostly funded through the solid waste user fee with a
73 smaller percentage of their funding generated through document review
74 fees. The Solid Waste Program charges \$125 per hour, as approved by the
75 Solid and Hazardous Waste Commission, to review permitting documents.

76 Due to a sweep of \$363,243 in 2020 by the legislature to support COVID
77 relief efforts, recent obligations to conduct groundwater monitoring at
78 small landfills and performing document reviews at no cost to small
79 landfills, the solid waste management fund experienced a budget shortfall
80 of about \$98,000 in state Fiscal Year 2023. Due to the budget shortfall,
81 the solid waste program is holding 3 positions vacant. One vacant position
82 is a solid waste inspector position, and the other 2 are solid waste

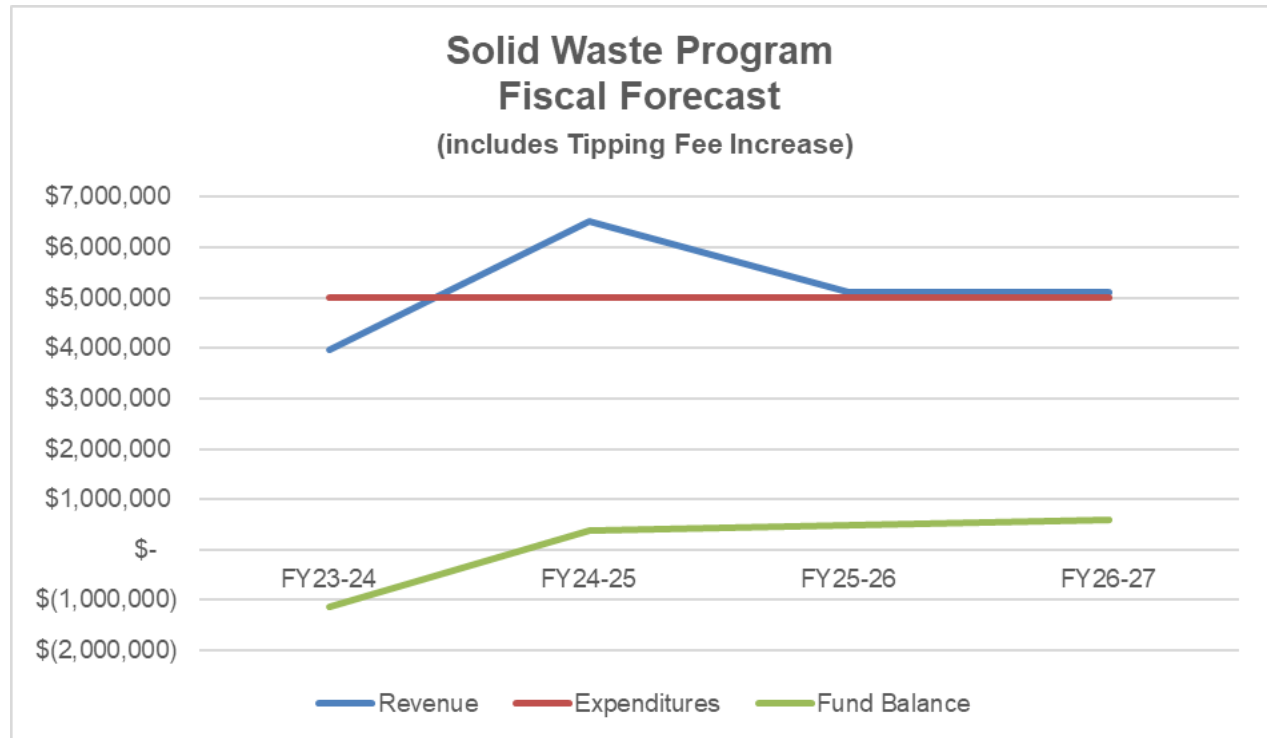
permitting positions. As shown below, document review backlog times increased in FY 2023 due to the lack of the 2 permitting staff.

Average number of elapsed days document types are in backlog (based on document complexity)



The Solid Waste and Materials Management Program's other funding sources are adequate to support the remaining 7 FTE at this time.

The Solid and Hazardous Waste Commission last approved an increase to the solid waste user fee for the solid waste management fund in 2010 to support the Solid Waste and Materials Management administrative functions.



In an effort to create a positive cash balance in the solid waste management fund, the solid waste user fee will increase a total of \$0.04 from \$0.21 per cubic yard to \$0.25 per cubic yard of waste disposed in solid waste facilities in July 1, 2024. Additionally, from July 1, 2024 through June 30, 2025, the entire portion of Hazardous Substance Response Fund (HSRF) of the solid waste user fee, or \$0.05 per cubic yard, will drop to zero and will instead be shifted to the solid waste program. The proposed changes are shown in the chart below.

From July 1, 2024 to June 30, 2025, the solid waste user fee will be:

Solid Waste User Fee	Cubic Yard Rate	Ton Rate
Solid Waste Program § 25-16-104.5(1.7)(a) (I)	\$0.22	\$0.73
Hazardous Substance Response Fund § 25-16-104.5(1.7)(a) (II)	\$0.00	\$0.00
Department of Law § 25-16-104.5(1.7)(a) (III)	\$0.03	\$0.10
Total SWUF Note: Does not include RREO fee as defined in § 25-16- 104.5(3.9)	\$0.25	\$.83

Beginning on July 1, 2025, the solid waste user fee will be:

Solid Waste User Fee	Cubic Yard Rate	Ton Rate
Solid Waste Program § 25-16-104.5(1.7)(a) (I)	\$0.17	\$0.57
Hazardous Substance Response Fund § 25-16-104.5(1.7)(a) (II)	\$0.05	\$0.17
Department of Law § 25-16-104.5(1.7)(a) (III)	\$0.03	\$0.10
Total SWUF Note: Does not include RREO fee as defined in § 25-16- 104.5(3.9)	\$0.25	\$.83

Issues Encountered During Stakeholder Process:

The Hazardous Materials and Waste Management Division conducted two stakeholder meetings to present the proposed changes to the Solid Waste User Fee. An initial stakeholder meeting was held on October 27, 2023 and an additional stakeholder meeting was held on November 28, 2023. The

149 Hazardous Materials and Waste Management Division did not encounter
150 any issues during the stakeholder process.
151

152 **Regulatory Alternatives**

153
154 No other regulatory alternatives were evaluated.
155

156 **Cost/Benefit Analysis**

157 A cost-benefit analysis will be performed if requested by the Colorado
158 Department of Regulatory Agencies.

Notice of Proposed Rulemaking

Tracking number

2024-00026

Department

1000 - Department of Public Health and Environment

Agency

1007 - Hazardous Materials and Waste Management Division

CCR number

6 CCR 1007-3 Part 267

Rule title

SOLID WASTE SITES AND FACILITIES

Rulemaking Hearing

Date

02/20/2024

Time

09:00 AM

Location

This meeting will be held online only at: <https://us02web.zoom.us/join/9tZ0ldeyvqDktG9A80u-6CDaKszafa2dunsSD>

Subjects and issues involved

Part 267 of the Colorado Hazardous Waste Regulations (6 CCR 1007-3) is being amended at this time to remove requirements which correspond to repealed statutory requirements found in C.R.S. 24-33.5-1234 and to add the current requirements of C.R.S. 24-33.5-1234, 25-5-1303.5, and 25-5-1309 to Subpart Q. The revised Subpart requires all persons who store or use one or more gallons of PFAS AFFF to comply with the requirements of the registration and certificate program, the restrictions surrounding certain uses of PFAS AFFF, the additional reporting requirements which pertain to self-certification and water quality spills hotline reporting, capture requirements for the containment of finished PFAS AFFF during use, and the safe storage requirements for the storage of spent PFAS AFFF and all associated wastes. These amendments incorporate the exemption criteria created by HB22-1345 and found in 25-5-1303.5 for the use of PFAS AFFF as required or authorized by federal law or implemented as required for a military purpose. These amendments do not prohibit the use of PFAS AFFF for real-world Class B fire responses, nor do they establish requirements for persons using or storing Class B firefighting foams which do not contain PFAS.

Statutory authority

These modifications are made pursuant to the authority granted to the Solid and Hazardous Waste Commission in Section 25-15-302(2), C.R.S.

Contact information

Name

Brandy Valdez Murphy

Title

Administrator, Solid and Hazardous Waste Commission

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303-692-3467

Email

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COLORADO

Solid & Hazardous
Waste Commission

Department of Public Health & Environment

NOTICE OF PROPOSED RULEMAKING HEARING BEFORE THE COLORADO SOLID AND HAZARDOUS WASTE COMMISSION

SUBJECT:

For consideration of the amendments to 6 CCR 1007-3, Parts 267, Subpart Q, along with the accompanying Statement of Basis and Purpose, the following will be considered:

Amendment of 6 CCR 1007-3, Parts 267, Subpart Q - Regulations Pertaining to Hazardous Waste - Class B Firefighting Foam Containing PFAS

These modifications are made pursuant to the authority granted to the Solid and Hazardous Waste Commission in Section 25-15-302(2), C.R.S.

Part 267 of the Colorado Hazardous Waste Regulations (6 CCR 1007-3) is being amended at this time to remove requirements which correspond to repealed statutory requirements found in C.R.S. 24-33.5-1234 and to add the current requirements of C.R.S. 24-33.5-1234, 25-5-1303.5, and 25-5-1309 to Subpart Q. The revised Subpart requires all persons who store or use one or more gallons of PFAS AFFF to comply with the requirements of the registration and certificate program, the restrictions surrounding certain uses of PFAS AFFF, the additional reporting requirements which pertain to self-certification and water quality spills hotline reporting, capture requirements for the containment of finished PFAS AFFF during use, and the safe storage requirements for the storage of spent PFAS AFFF and all associated wastes. These amendments incorporate the exemption criteria created by HB22-1345 and found in 25-5-1303.5 for the use of PFAS AFFF as required or authorized by federal law or implemented as required for a military purpose. These amendments do not prohibit the use of PFAS AFFF for real-world Class B fire responses, nor do they establish requirements for persons using or storing Class B firefighting foams which do not contain PFAS.

Any information that is incorporated by reference in these proposed rules is available for review at the Colorado Department of Public Health and Environment, Hazardous Materials and Waste Management Division and any state publications depository library.

Pursuant to C.R.S. §24-4-103(3), a notice of proposed rulemaking was submitted to the Secretary of State on January 12, 2024. Copies of the proposed rulemaking will be mailed to all persons on the Solid and Hazardous Waste Commission's mailing list on or before the date of publication of the notice of proposed rulemaking in the Colorado Register on January 25, 2024.

The proposed rulemaking materials may also be accessed at
<https://cdphe.colorado.gov/shwc-rulemaking-hearings>.



WRITTEN TESTIMONY

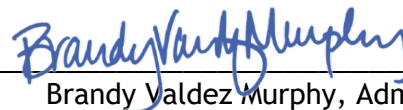
Any alternative proposals for rules or written comments relating to the proposed amendment of the regulation will be considered. The Solid and Hazardous Waste Commission will accept written testimony and materials regarding the proposed alternatives. **The commission strongly encourages interested parties to submit written testimony or materials to the Solid and Hazardous Waste Commission Office, via email to cdphe.hwcrequests@state.co.us by Wednesday, February 7, 2024, at 11:59 p.m. Written materials submitted in advance will be distributed to the commission members prior to the day of the hearing.** Submittal of written testimony and materials on the day of the hearing will be accepted, but is strongly discouraged.

HEARING SCHEDULE:

DATE: Tuesday, February 20, 2024
TIME: 9:00 a.m.
PLACE: This meeting will be held online only at:

<https://us02web.zoom.us/meeting/register/tZ0ldeyvqDktG9A80u-6CDaKszafa2dunsSD>

Oral testimony at the hearing regarding the proposed amendments may be limited.



Brandy Valdez Murphy, Administrator



1 DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

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4 Solid and Hazardous Waste Commission/Hazardous Materials and
5 Waste Management Division
6

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8 6 CCR 1007-3
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11 HAZARDOUS WASTE
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14 Amendments to Part 267, Subpart Q – Class B Firefighting Foam Containing PFAS
15

16
17 1) The Table of Contents for Part 267 is amended by revising Subpart Q to read as
18 follows:
19

20
21 PART 267 STANDARDS FOR THE MANAGEMENT OF SPECIFIC HAZARDOUS
22 WASTES AND SPECIFIC TYPES OF HAZARDOUS WASTE
23 MANAGEMENT FACILITIES.
24

25 *****
26

27
28 Subpart Q – Class B Firefighting Foam Containing PFAS
29

30

31	Sec.	
32	267.600	Purpose and Applicability Reserved
33	267.601	Definitions
34	267.605	Applicability of Rrequirements
35	267.606	Use prohibitions
36	267.610	Registration and Ccertificate Pprogram
37	267.611	Additional reporting
38	267.615	Capture Rrequirements
39	267.620	Spent Class B Firefighting Foam PFAS AFFF Sstorage
40	267.630	Penalties Reserved

41

42 2) Section 267.600 is deleted and reserved to read as follows:
43

44 § 267.600 ~~Purpose and Applicability~~Reserved.

45 ~~These regulations establish standards for persons that store or use Class B firefighting foam containing~~
46 ~~intentionally added perfluoroalkyl and/or polyfluoroalkyl substances or PFAS. These regulations apply to~~
47 ~~the storage of Class B firefighting foam containing intentionally added PFAS and the use and subsequent~~

storage of Class B firefighting foam containing intentionally added PFAS that is generated from testing firefighting foam fire systems.

3) Section 267.601 Definitions is amended to read as follows:

§ 267.601 Definitions.

In addition to the definitions in § 260.10, the following definitions apply to this subpart:

Capture means contained or otherwise controlled to prevent release of spent Class B firefighting foam containing PFAS to the environment, and to facilitate off-site disposal.

Class B firefighting foam containing intentionally added PFAS means foam designed for flammable liquid fires, e.g. Aqueous Film Forming Foam (AFFF), which contains intentionally added perfluoroalkyl and polyfluoroalkyl substances. These materials are referred to throughout this subpart as "PFAS AFFF".

Emergency means an unexpected situation or sudden occurrence of a serious and urgent nature that demands immediate action and that constitutes a threat to life or health, or that may cause major damage to property or the environment.

Facility, as used in the Subpart, means any non-residential place of business.

Finished PFAS AFFF means a mixture of class B firefighting foam containing intentionally added PFAS concentrate and water which has been aerated through a dispensing system.

Fire Department ~~includes, but is not limited to, municipal fire departments, volunteer fire departments, and fire protection districts.~~ means the duly authorized fire protection organization of a town, city, county, or city and county, a fire protection district, a metropolitan district or county improvement district that provides fire protection, or a volunteer fire department.

Firefighting foam fire systems means a system designed to provide protection from fire, or for the suppression of fire, through the use of firefighting foam.

Initial response means the extinguishment of a Class B fire.

Perfluoroalkyl and polyfluoroalkyl substances or **PFAS** means a class of fluorinated organic chemicals containing at least one fully fluorinated carbon atom.

Perfluoroalkyl and polyfluoroalkyl substances take-back program means the program created by 25-5-1311, C.R.S.

Person means ~~(1) a fire department, (2) a facility, or (3) a lessee that is subject to regulation by the federal aviation administration.~~ any individual, public or private corporation, partnership, association, firm, trust or estate; the state or any executive department, institution, or agency thereof; any municipal corporation, county, city and county, or other political subdivision of the state; or any other legal entity whatsoever which is recognized by law as the subject of rights and duties.

Public-use airport means a public airport; or a privately-owned airport to be used for public purposes that is a reliever airport; or determined by the U.S. Secretary of Transportation to have at least 2,500

passenger boardings each year and to receive scheduled passenger aircraft service per 49 USC § 47102(22) (2023).

Release means any spilling, leaking, pumping, pouring, emptying, discharging, injecting, escaping, leaching, dumping, or disposing of a chemical into the environment other than its intended use.

Spent PFAS AFFF means: a) finished PFAS AFFF, b) PFAS AFFF concentrate which has been taken out of service through participation in the perfluoroalkyl and polyfluoroalkyl substances take-back program, and c) PFAS AFFF concentrate created as a result of leaking containers, spills, or other releases.

Uses or stores means actual and intentional ownership and control of Class B firefighting foam containing intentionally added PFAS.

Water quality spills hotline means the Colorado Emergency Planning Committee 24-Hour Emergency and Incident Reporting Line, reached by calling 1-877-518-5608 or filling out this form: <https://cdphe.redcap.state.co.us/surveys/?s=HXEXXDC8T>.

4) Section 267.605 is amended by revising paragraph (a), deleting existing paragraph (b), renumbering existing paragraph (c) as new paragraph (b), revising new paragraph (b), and deleting paragraph (d) to read as follows:

§ 267.605 Applicability of ~~R~~requirements.

(a) All Persons who store or use one or more gallons of ~~Class B firefighting foam containing intentionally added PFAS~~ **AFF** are subject to: ~~the requirements of section 267.610 of these regulations for the registration and certificate program.~~

(1) The requirements of section 267.610 of these regulations for the registration and certificate program;

(2) The use prohibitions of section 267.606;

(3) The additional reporting requirements of section 267.611;

(4) The capture requirements of section 267.615; and

(5) The storage requirements of section 267.620.

~~(b) Persons who use Class B firefighting foam containing intentionally added PFAS for testing firefighting foam fire systems are subject to section 267.615 of these regulations for capture and containment of the spent firefighting foam containing PFAS.~~

~~(c)~~ **(b)** Persons who use PFAS AFF in the past have used Class B firefighting foam containing intentionally added PFAS for testing firefighting foam fire systems, and convert to firefighting foam fire systems testing methods that do not use ~~Class B firefighting foam containing intentionally added PFAS AFFF~~, are subject to sections 267.615 and 267.620 of these regulations for the capture, containment, and storage of spent PFAS AFFF ~~the and wastewater used created to flush the firefighting foam fire system the first time following during conversion activities~~. Following such conversion activities ~~and flushing~~, any subsequent use tests of the firefighting foam fire system shall not be subject to the requirements of sections 267.615

and 267.620, unless ~~firefighting foam containing intentionally added~~ PFAS AFFF is again intentionally reintroduced into the firefighting foam fire system.

~~(d) Persons who store spent Class B firefighting foam containing intentionally added PFAS used in testing firefighting foam fire systems are subject to section 267.620 of these regulations.~~

5) Subpart Q of Part 267 is amended by adding new section 267.606 (Use prohibitions) to read as follows:

§ 267.606 Use prohibitions.

(a) No persons or fire department may discharge or otherwise use for training purposes or for testing firefighting foam fire systems which employ PFAS AFFF.

(b) The use of PFAS AFFF is prohibited at all Colorado public-use airport structures used for the storage or maintenance of aircraft.

6) Section 267.610 (Registration and certificate program) is amended to read as follows:

§ 267.610 Registration and ~~C~~ertificate ~~P~~rogram

(a) Persons who store and/or use ~~Class B firefighting foam containing intentionally added~~ PFAS AFFF must register and obtain a certificate of registration ~~from the Department by June 1, 2021, or~~ within six months after ~~they~~ first obtains ~~Class B firefighting foam containing~~ PFAS AFFF.

(b) Registration must be completed on-line through the Department's Class B firefighting foam web-site at <https://cdphe.colorado.gov/pfcs/pfas-colorado-laws>. Persons may modify their registration information at any time by accessing the Department's Class B firefighting foam web-site.

(c) The Department will review each registration application, and if it determines the application is complete, will use its best efforts to approve the application within 15 business days of receipt by issuing an electronic certificate to the registrant. If the application is not complete, the Department will use its best efforts to notify the registrant and identify any additional information that is needed to complete the application within 15 business days of receipt.

~~(d) A certificate of registration for storage and/or use of Class B firefighting foam containing intentionally added PFAS must only be obtained one time. Persons may modify their registration information at any time by accessing the Department's Class B firefighting foam web-site at <https://cdphe.colorado.gov/pfcs/pfas-colorado-laws>.~~

7) Subpart Q of Part 267 is amended by adding new section 267.611 (Additional reporting) to read as follows:

§ 267.611 Additional reporting.

(a) The Department, as deemed necessary, may require persons who store or use one or more gallons of PFAS AFFF, and have registered and obtained a certificate in accordance with section 267.610, to furnish additional reporting concerning the quantities and disposition of PFAS AFFF.

(b) Persons who store or use one or more gallons of PFAS AFFF and who receive a self-certification checklist from the Department shall complete and return the checklist within the time specified in the instructions provided by the Department.

(1) The Department shall provide persons who store or use one or more gallons of PFAS AFFF a minimum of 14 days from the date of receipt to return the checklist. A checklist is deemed returned on the date it is received by the Department. The Department may provide an extension of time to complete and return a checklist upon request.

(2) The self-certification checklist shall contain a certification in substantially the following form, which must be signed by an authorized representative of the generator:

"I, the undersigned facility representative, certify that:

i. I have personally examined and am familiar with the information contained in this submittal;

ii. the information contained in this submittal is to the best of my knowledge true, accurate, and complete in all respects;

iii. I am fully authorized to make this certification on behalf of this facility; and

iv. I am aware that there are significant penalties including, but not limited to, possible fines and imprisonment for willfully submitting false, inaccurate, or incomplete information."

(3) The completed and certified checklist must be maintained and made readily available for inspection by persons who store or use one or more gallons of PFAS AFFF for three years following the date the checklist was certified.

(c) The use or release of PFAS AFFF must be reported to the water quality spills hotline within twenty-four hours after its use or release.

(1) Except as provided by subsection (f) of this Section, the requirements described in subsections (c) through (e) of this Section do not apply to persons who use PFAS AFFF and are required or authorized to do so under federal law, including 14 CFR 139, or otherwise required for a military purpose.

(d) In accordance with paragraph (c) of this section, the following information must be reported to the water quality spills hotline within twenty-four hours of the use or release of PFAS AFFF and must be maintained and made readily available for inspection for three years following the date the information was reported:

(1) A description of the event which resulted in the use or release of PFAS AFFF;

(2) The trade name and product name of the PFAS AFFF;

(3) The amount and type of PFAS chemicals in the PFAS AFFF; and

(4) The quantity of PFAS AFFF or any associated firewater, wastewater, runoff, and other waste that is used or released.

(e) Users of PFAS AFFF must document any measures undertaken pursuant to the requirements of this section. In investigating compliance with the requirements of this section, the attorney general may

request that the user provide the documentation created pursuant to the requirements of this subsection to the attorney general.

(f) If the Director, through the Solid and Hazardous Waste Commission, determines by rule that the laws or requirements described in subsection (c)(1) of this Section no longer apply to a particular industry or sector, the Director shall provide notice on the department's website of this determination and shall promulgate rules, through the Solid and Hazardous Waste Commission, prohibiting users of PFAS AFFF within that industry or sector from using PFAS AFFF in violation of this section, which rules shall apply no sooner than two years after the Director's determination.

8) Section 267.615 (Capture requirements) is amended to read as follows:

§ 267.615 Capture ~~R~~requirements.

~~(a) Class B firefighting foam containing intentionally added PFAS shall not be used for testing firefighting foam fire systems unless it is captured in containment systems designed and operated to prevent release of PFAS to the environment. Pursuant to § 267.606, no persons or fire department may discharge or otherwise use for training purposes or for testing firefighting foam fire systems which employ PFAS AFFF. PFAS AFFF users must fully contain finished PFAS AFFF by implementing appropriate containment measures during use, which may include bunds, ponds, or an equivalent means of providing containment, unless:~~

~~(1) The persons who discharge or otherwise use PFAS AFFF are required or authorized to do so under federal law, including 14 CFR 139, or otherwise required for a military purpose.~~

~~(b) A containment system used to capture Class B firefighting foam containing intentionally added PFAS discharged during testing must be designed and constructed as follows:~~

~~(1) Portions of containment systems comprised of concrete must be:~~

~~i. constructed of man-made materials of sufficient strength and thickness to contain spent foam and liquids;~~

~~ii. supported by an adequate foundation;~~

~~iii. free of cracks and gaps and be sufficiently impervious to contain spent foams and liquids; and~~

~~iv. sloped or otherwise designed to drain and remove liquids;~~

~~(2) Portions of containment systems comprised of pipes must function as designed to contain spent foams and liquids;~~

~~(3) All containment systems must be designed and constructed to contain 110% of the expected foam and liquids discharged during testing.~~

~~(b) Pursuant to subsection (a) of this Section, containment measures meeting the following specifications shall be implemented to capture PFAS AFFF discharged during use:~~

~~(1) Containment measures must be under the control of the user of PFAS AFFF;~~

~~(2) Containment measures must be impervious to PFAS chemicals to prevent~~

the lateral escape of finished foam from the containment measures, and may absorb PFAS chemicals to help prevent such escape. Containment measures may include:

i. Bunds, dikes, berms or culverting sufficient to contain finished PFAS AFFF;

ii. Spill diversion or retention ponds;

iii. Weirs, booms, or other barriers;

iv. Sorbent materials; or

v. Any equivalent means of implementing containment measures which are impervious to PFAS to prevent the lateral escape of the finished foam from the containment measures; and

(3) Containment measures must not allow the finished PFAS AFFF, or any associated firewater, wastewater, runoff, or other waste to be released.

~~(c) A containment system used to capture Class B firefighting foam containing intentionally added PFAS discharged during testing must be operated as follows:~~

~~—(1) The containment system must be fit for use and must not leak.~~

~~i. Persons subject to these regulations must obtain and keep on file and available for inspection a written assessment reviewed and certified by an independent qualified professional engineer that attests to the containment system's integrity by June 1, 2021, or, for new systems, prior to operating the system.~~

~~ii. An independent qualified professional engineer must review and re-certify the written assessment prior to the next testing event, but no more often than annually. If the system fails a testing event, an independent qualified professional engineer must review and re-certify the written assessment following any repairs or modifications to the system.~~

~~iii. This assessment must determine that the containment system is adequately designed and has sufficient structural strength to ensure it will not collapse, rupture, or fail. At a minimum this assessment must consider the following:~~

~~A. Documented age of the containment system; and~~

~~B. Results of a leak test, internal inspection, video inspection or other integrity examination that addresses cracks, leaks, corrosion, and erosion of the containment system.~~

~~iv. If, as a result of the assessment, a containment system is found to be leaking or unfit for use, it must immediately be taken out of service and repaired.~~

~~(2) The containment system must be operated to capture all spent foam and liquids during testing without splashing or spraying wastes outside of the system.~~

~~(3) Spent foam and liquids generated during testing and collected in the containment system must be removed from the containment system and placed in storage as required by section 267.620 within 24 hours of completing the testing, or at least once per day.~~

(c) Containment measures used to capture PFAS AFFF cannot be used for long term storage of the PFAS AFFF. Following the initial response to an immediate emergency, the captured finished PFAS

AFFF must be removed from containment measures and placed in storage containers to the extent possible, but within 2448 hours of use. Containers used to store the captured finished PFAS AFFF must be managed in accordance with the safe storage requirements of § 267.620.

~~(d) Containment systems used to capture Class B firefighting foam containing intentionally added PFAS discharged during testing activities must be designed or operated to prevent run-on or infiltration of precipitation into the system.~~

9) Section 267.620 is amended to read as follows:

§ 267.620 Spent ~~Class B Firefighting Foam~~ PFAS AFFF Storage

(a) Persons who store spent PFAS AFFF must safely store such material and any associated firewater, wastewater, runoff, and other waste in a way which prevents their release until further revisions to these regulations are issued. Spent Class B firefighting foam containing intentionally added PFAS generated during testing must be shipped off-site for treatment and disposal as soon as possible. Waste foam may be stored on-site in containers prior to disposal provided that:

(1) On-site storage is necessary to facilitate, including to accumulate quantities sufficient to facilitate, proper off-site treatment and disposal; and The requirements described in subsections (b)(2) through (b)(6) of this Section do not apply to persons who store spent PFAS AFFF taken out of service through participation in the perfluoroalkyl and polyfluoroalkyl substances take-back program in its original factory-sealed container, so long as the container is managed in accordance with subsection (b)(1) of this Section.

(2) On-site storage does not occur longer than 120 days, unless a variance is granted by the Director in writing extending the storage duration. Absent a demonstration that disposal capacity is not available, any extension shall be limited to an additional 120 days. The requirements described in this Section do not apply to persons who store or use PFAS AFFF and are required or authorized to do so under federal law, including 14 CFR 139, or otherwise required for a military purpose.

(b) Containers used to store spent ~~Class B firefighting foam containing intentionally added PFAS~~ AFFF ~~used in testing~~ must be:

(1) DOT approved containers; Made of materials that will not react with, and are otherwise compatible with the spent PFAS AFFF to be accumulated, so that the ability of the container to contain the spent PFAS AFFF is not impaired.

i. If a container holding spent PFAS AFFF is not in good condition, or if it begins to leak, persons who store the spent PFAS AFFF must immediately transfer the spent PFAS AFFF from this container to a container that is in good condition and does not leak.

(2) Labelled with content and accumulation start date;

(3) Kept closed except when adding or removing spent PFAS AFFF ~~wastes~~;

(4) Arranged in a stable configuration ~~(not stacked) with aisle space to facilitate their inspection and movement in event of an~~ to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of the facility operation in an emergency; and to allow for inspection of containers.

i. Containers which have a volume of 20 gallons or less may be stacked in an alternate stable arrangement, up to three high and three wide, not to exceed six feet.

(5) Stored on a flat surface that is bermed or otherwise designed to prevent run-on or run-off of precipitation; and

(6) Stored in a manner that provides secondary containment that is either:

- i. a concrete pad(s) free of cracks and gaps and otherwise ~~impervious~~ constructed to prevent releases to the environment in the event of a spill or leak; or
- ii. a liner that has sufficient strength and thickness, and that is otherwise ~~impervious~~ constructed to prevent releases to the environment in the event of a spill or leak; or
- iii. an equivalent means of providing secondary containment.

(7) At least weekly, the owner or operator must inspect areas where containers are stored. The owner or operator must look for leaking containers and for deterioration of containers and the containment system caused by corrosion or other factors.

- i. Problems identified during the inspection shall be remedied within 24 hours of identifying; and
- ii. The date and time and content of the inspections must be documented and recorded, and retained at the facility for 3 years of the date of storage.

10) Section 267.630 is deleted and reserved to read as follows:

§ 267.630 ~~Penalties~~ Reserved.

~~Persons who violate any of the requirements of this Subpart shall be subject to enforcement, including assessment of civil or administrative penalties, as provided in §§ 25-15-308(2) and 25-15-309, C.R.S.~~

11) Section 8.103 (Statement of Basis for the Rulemaking Hearing of February 20, 2024) is added to Part 8 of the Regulations to read as follows:

Statement of Basis and Purpose Rulemaking Hearing of February 20, 2024

8.103 Basis and Purpose.

These amendments to 6 CCR 1007-3, Part 267 are made pursuant to the authority granted to the Solid and Hazardous Waste Commission in § 25-15-302(2), C.R.S.

Amendments to Part 267 Subpart Q - Class B Firefighting Foam Containing PFAS

HB19-1279 amended C.R.S. 24-33.5-1234 to prohibit persons or fire departments from discharging or otherwise using Class B firefighting foam (PFAS AFFF) for training or for testing purposes. HB20-1119

459 amended C.R.S. 25-15-302 to require the Solid and Hazardous Waste Commission (SHWC) to establish
460 a Certificate of Registration for any facility or fire department, or lessee subject to federal rules and
461 regulations, that use or store PFAS AFFF. The Bill further amended C.R.S. 24-33.5-1234 to establish an
462 exemption for certain testing activities which employ PFAS AFFF, so long as the testing activities were
463 conducted in accordance with standards for capture and disposal of PFAS AFFF used for testing
464 purposes and the person or fire department who conducted the testing activities had obtained a
465 Certificate of Registration. Those standards were established and became effective on April 14, 2021
466 under the existing 6 CCR 1007-3, Part 267, Subpart Q. The exemption created by HB20-1119 was
467 repealed effective January 1, 2023, rendering the existing 6 CCR 1007-3, Part 267, Subpart Q exemption
468 language obsolete.

469
470 HB20-1119 amended C.R.S. 25-5-1309 to restrict the use of PFAS AFFF at Colorado public-use airports
471 structures used for the storage or maintenance of aircraft beginning January 1, 2023. HB22-1345 further
472 amended C.R.S. 25-5-1309, deferring the restriction to take effect January 1, 2024.

473
474 HB22-1345 also amended C.R.S. 25-5-1303.5 to require that persons who use PFAS AFFF not allow a
475 release, contain PFAS AFFF and all associated waste during use, safely store all PFAS AFFF and all
476 associated wastes, and report all uses and releases of the material to the Water Quality Spills Hotline.

477
478 Part 267 of the Colorado Hazardous Waste Regulations (6 CCR 1007-3) is being amended at this time to
479 remove requirements which correspond to repealed statutory requirements found in C.R.S. 24-33.5-1234
480 and to add the current requirements of C.R.S. 24-33.5-1234, 25-5-1303.5, and 25-5-1309 to Subpart Q.
481 The revised Subpart requires all persons who store or use one or more gallons of PFAS AFFF to comply
482 with the requirements of the registration and certificate program, the restrictions surrounding certain uses
483 of PFAS AFFF, the additional reporting requirements which pertain to self certification and water quality
484 spills hotline reporting, capture requirements for the containment of finished PFAS AFFF during use, and
485 the safe storage requirements for the storage of spent PFAS AFFF and all associated wastes. These
486 amendments incorporate the exemption criteria created by HB22-1345 and found in 25-5-1303.5 for the
487 use of PFAS AFFF as required or authorized by federal law or implemented as required for a military
488 purpose. These amendments do not prohibit the use of PFAS AFFF for real-world Class B fire responses,
489 nor do they establish requirements for persons using or storing Class B firefighting foams which do not
490 contain PFAS. The proposed regulatory changes were developed utilizing a series of two stakeholder
491 meetings at which comments were received from interested parties, discussed, and incorporated as
492 appropriate. The group of stakeholders who participated in this process included fire departments,
493 airports, and military personnel registered under the Subpart Q Registration and Certification Program,
494 non-profit Colorado trade associations, international trade associations, members of local governments
495 and utilities, and other interested individuals. Comments received in writing from individual stakeholders,
496 on two separate drafts of the proposed revisions, were incorporated as well. The Department believes
497 that all stakeholder concerns have been resolved to the extent possible.

498
499 Class B firefighting foams are used to put out fires involving Class B materials, which include gasoline, oil,
500 and jet fuel. Class B foams can be categorized into two broad categories from a PFAS perspective:
501 fluorinated foams that contain PFAS, like Aqueous Film Forming Foam (AFFF), and fluorine free foams.
502 AFFF is usually created by combining foaming agents with fluorine surfactants. PFAS are the active
503 ingredients in the fluorinated surfactants used in the foams and are typically contained in the foams at up
504 to 3% concentrations, or 300,000 parts per million. When mixed with water and discharged, the foam

forms an aqueous film that quickly cuts off the oxygen to a flame, extinguishing the fire, and stopping the fire from relighting.

PFAS are a family of human-made chemicals with over 5,000 compounds that have been used for decades in products like food packaging, carpets, non-stick products, other household items, medical supplies, and firefighting foam due to their ability to resist heat, oil, stains, grease, and water. PFAS can be harmful to human health and the environment when released to the soil, surface water or groundwater. Health effects from PFAS exposure may include pregnancy complications, developmental effects, and liver and kidney effects. Perfluorooctanoic acid (PFOA) and Perfluorooctane sulfonic acid (PFOS) are synthetic, eight carbon non-polymer organic compounds that are PFAS. These two chemicals along with anions, perfluorooctanoate and perfluorooctane sulfonate respectively, were added to the list of hazardous constituents in Appendix VIII to Part 261 of the Colorado Hazardous Waste Regulations (6 CCR 1007-3) in 2018 due to their toxicity to humans at very low concentrations. For this reason, in 2022, EPA issued interim lifetime health advisory levels of 0.004 parts per trillion for PFOA and 0.02 parts per trillion for PFOS for safe consumption of drinking water, lowered from the 70 parts per trillion 2016 combined health advisory level for PFOA and PFOS. Once released to the environment, PFAS are persistent, and can contaminate environmental media. Human exposure to PFAS through the ingestion of contaminated drinking water is of major concern, but exposure can also happen through dermal and inhalation routes. Class B firefighting foams containing PFAS is a leading source of PFAS contamination impacting Colorado communities.

While Class B firefighting foams containing PFAS are slowly being replaced with alternative products that do not contain the toxic compounds, many of these alternative products have not been completely tested and approved for fighting high hazard flammable liquid fires. For example, the U.S. Department of Defense (DoD) published a military specification (MIL-PRF-32725) for fluorine-free firefighting foam (F3) in January 2023. The Naval Sea Systems Command (NAVSEA) oversees the qualification process of F3, and as of January 2024, one product has been qualified and listed in the DoD Qualified Products Database (QPD)/Qualified Products List (QPL). Additionally, the Federal Aviation Administration (FAA) informed Airport operators and industry stakeholders in its January 2023 National Part 139 CertAlert No. 23-01 that it will accept airport operator's use of F3s qualified under MIL-PRF-32725, but will not require their use as of the date of the CertAlert. For these reasons, large inventories of the Class B firefighting foam containing PFAS still remain, and PFAS containing firefighting foams are still used routinely to extinguish these dangerous fires.

The requirements in the revised Subpart Q to Part 267 of 6 CCR 1007-3 are focused on addressing the risks associated with the contamination of soil and groundwater with perfluoroalkyl and polyfluoroalkyl chemicals found in PFAS AFFF, as well as removing requirements which correspond to repealed statutes. The revised Subpart requires all persons who store or use one or more gallons of PFAS AFFF to comply with the requirements of the Subpart, with exemption criteria defined in certain sections for the use of PFAS AFFF where required or authorized by federal law or implemented as required for a military purpose.

The amendments establish new definitions in Section 267.601 for the following terms used throughout the amended Subpart Q:

- 1) The definition of "Emergency" is adapted from 6 CCR 1007-2, Part 1, Section 1.2. The purpose of its insertion into the Subpart is to clarify the Section 267.615 requirement to remove finished PFAS AFFF from containment measures within 48-hours of the initial response to an immediate emergency.
- 2) The definition of "Finished PFAS AFFF" is adapted from industry terminology. The purpose of its insertion into the Subpart is to clarify the definition of "Spent PFAS AFFF" and differentiate it between PFAS AFFF concentrate.
- 3) The definition of "Initial response" is adapted from 6 CCR 1007-2, Part 1, Section 5.5.4. The purpose of its insertion into the Subpart is to clarify when the Section 267.615(c) removal requirement is triggered.
- 4) The definition of "Perfluoroalkyl and polyfluoroalkyl substances take-back program" is incorporated by reference to C.R.S. 25-5-1311. The purpose of its insertion into the Subpart is to define the materials that may be exempt from the Section 267.620 storage requirements.
- 5) The definition of "Public use airport" is adapted from the definition found in 40 USC § 47102(22) (2023). The purpose of its insertion into the Subpart is to clarify which airports may be subject to the Section 267.606 use prohibitions.
- 6) The definition of "Release" is adapted from C.R.S. 25-5-1302. The purpose of its insertion into the Subpart is to define those circumstances which would constitute a release, and therefore to what circumstances the requirements of the Subpart would be applicable.
- 7) The definition of "Spent PFAS AFFF" is adapted from industry terminology. The purpose of its insertion into the Subpart is to define what materials would be subject to the Section 267.620 Spent PFAS AFFF storage requirements and to differentiate it from PFAS AFFF concentrate.
- 8) The definition of "Water quality spills hotline" is adapted from the Water Quality Control Division's website. One purpose of its insertion into the Subpart is to include for reference the phone number and website of the hotline for ease of access. Another purpose of its insertion is to define the hotline that must be contacted pursuant to the requirements of Section 267.611.

The amendments establish revised definitions in Section 267.601 for the following terms used throughout the amended Subpart Q:

- 1) The definition of "Class B firefighting foam containing intentionally added PFAS" is amended to state that the term Class B Firefighting foam is referred to as "PFAS AFFF" throughout the Subpart. The purpose of this revision is to improve the clarity of the regulation and reduce its length.
- 2) The definition of "Fire department" is amended to align with the definition of "fire department" found in C.R.S. 25-5-1302. The purpose of this revision is to better align the regulation with the corresponding Statute.
- 3) The definition of "Person" is adapted from 6 CCR 1007-3, Part 260.10. The purpose of its insertion is to ensure the regulation encompasses all applicable entities.

The amendments revise Section 267.605 - Applicability of requirements of Subpart Q to revise the applicability of capture, containment, and storage requirements from only those who use PFAS AFFF for testing activities to those who use PFAS AFFF for any purpose.

594 Additionally, the amendments revise the applicability of the existing Section 267.605(c), which requires
595 the capture, containment, and storage of spent PFAS AFFF created specifically from conversions of
596 PFAS AFFF systems used for testing to F3 systems. Due to the repealed testing exemption found in
597 C.R.S. 24-33.5-1234, the section is revised to be applicable to all conversions of PFAS AFFF systems to
598 F3 systems.

600 The amendments revise Subpart Q to include a new Use prohibitions Section 267.606. The purpose of
601 this section is to list two relevant statutory restrictions on the use of PFAS AFFF in regulation: the existing
602 restriction of C.R.S. 24-33.5-1234 on the use of PFAS AFFF for training or testing firefighting foam fire
603 systems and the new restriction of C.R.S. 25-5-1309 on the use of PFAS AFFF at Colorado public-use
604 airport structures used for the storage or maintenance of aircraft.

606 The amendments retain the existing, mandatory on-line registration program for all those who store or
607 use PFAS AFFF. The registration requires that basic information about the fire department or facility be
608 provided to the Division along with information concerning the quantities and configurations of the storage
609 of the PFAS AFFF. Once information is provided to the Division through the on-line registration, the
610 Division will continue to review the information and issue a Certificate of Registration. Certificates must
611 be obtained from the Division within six (6) months after the fire department or facility first stores or uses
612 the PFAS AFFF.

614 The amendments revise Subpart Q to include a new additional reporting requirements section, Section
615 267.611, which requires those who have registered and obtained a certificate of registration in
616 accordance with Section 267.610 to furnish additional reporting concerning quantities and disposition of
617 PFAS AFFF. This new section implements a self certification program for which those who have
618 registered and obtained a certificate of registration must complete and return a checklist summarizing
619 their compliance status with individual requirements found in 6 CCR 1007-3, Part 267, Subpart Q. This
620 requirement is added under the authority of C.R.S. 25-5-1303.5(e). The self certification checklist will be
621 designed to help those subject to regulatory requirements understand and comply with the regulations
622 that are applicable to them. The section also requires the use or release of PFAS AFFF be reported to the
623 water quality spills hotline. This requirement corresponds with 25-5-1303.5(d) and (e), and includes an
624 exemption for the use of PFAS AFFF as required or authorized by federal law or implemented as required
625 for a military purpose. To ensure the records necessary to verify compliance are maintained by persons
626 who use or store one or more gallons of PFAS AFFF, Section 267.611 is amended to include a record
627 retention requirement of 3 years for measures undertaken pursuant to the requirements of the section.
628 Many of the requirements included in the amendments are derived from requirements of Colorado House
629 Bill 22-1345 and have an effective date of January 1, 2024, including: users must not allow a release;
630 contain PFAS AFFF and all associated waste during use; safely store all PFAS AFFF and all associated
631 wastes; report all uses and releases to the Water Quality Spills Hotline; and PFAS AFFF use is prohibited
632 at all Colorado public use airport hangars. For this reason, information which may be requested pursuant
633 to 6 CCR 1007-3, Part 267.611 may include information relevant to activities which took place after the
634 January 1, 2024, but before the effective date of the rule.

636 The amendments revise the scope of Section 267.615 from the capture requirements for PFAS AFFF
637 specifically used in testing activities in dedicated containment systems to the requirements for the capture
638 of PFAS AFFF created in real-world emergency situations using appropriate containment measures. One
639 purpose of this revision is to remove the specifications for the design, construction and operation of

containment systems used to capture PFAS AFFF discharged during testing activities due to the repealed testing exemption found in C.R.S. 24-33.5-1234. Another is to implement regulations that correspond with the requirement to contain PFAS AFFF during use using appropriate containment measures in accordance with C.R.S. 25-5-1303.5. Examples of appropriate containment measures found in the amendment include bunds, ponds or any other equivalent means of providing containment, but other appropriate containment measures may also include barriers, berms, booms, storm drain covers, dikes, trenches, and conveyances. The section requires containment measures to be impervious to PFAS chemicals to prevent the lateral escape of finished foam from the containment measures as described in C.R.S. 25-5-1303.5(1)(b)(ii), and may absorb PFAS chemicals to help prevent such escape. The requirement applies to temporary controls deployed by PFAS AFFF users during emergency situations for the purpose of limiting the lateral spread of finished PFAS AFFF to only those areas necessary for vapor suppression and extinguishment of Class B fires. Furthermore, the intended applicability of this requirement is not to the actual location where PFAS AFFF is applied. The amended language replaces the requirement to remove spent foam and liquids generated from testing activities, and place into storage within 24 hours of completing testing, with the requirement to remove finished PFAS AFFF used during real-world emergency situations from containment measures and place into storage within 48-hours of the extinguishment of the Class B Fire. One purpose of this revision is to remove the requirements applicable to spent PFAS AFFF created from testing activities due to the repealed testing exemption found in C.R.S. 24-33.5-1234. Another purpose is to extend the allotted time to remove finished PFAS AFFF from containment measures, and placement into storage, from 24-hours to 48-hours in consideration of the fact that the original 24-hour requirement was intended for dedicated containment systems specifically designed for testing firefighting foam systems which employed PFAS AFFF. The intent of this requirement is to limit the potential risks to human health and the environment associated with long term storage of finished PFAS AFFF in temporary containment measures.

The amendments revise the scope of Section 267.620 from only storage requirements applicable to spent PFAS AFFF created during testing activities to storage requirements applicable to all spent PFAS AFFF. One purpose of this revision is to remove the requirements applicable to spent PFAS AFFF created from testing activities due to the repealed testing exemption found in C.R.S. 24-33.5-1234. Another purpose is to replace the requirement to ship spent PFAS AFFF off-site for treatment and disposal as soon as possible with the requirement to safely store spent PFAS AFFF and any associated waste until further revisions to the regulations are made. This requirement is amended due to the requirement of C.R.S. 25-5-1303.5 to safely store PFAS AFFF and all associated waste until the federal environmental protection agency has published guidance on the proper disposal and destruction methods for PFAS chemicals. The amendments include this safe storage requirement due to the federal environmental protection agency not publishing such guidance as of the time of this rulemaking. Additionally, the amendments create an exemption from the safe storage requirements for those who store spent PFAS AFFF taken out of service through participation in the perfluoroalkyl and polyfluoroalkyl substances take-back program in its original factory-sealed container, so long as the PFAS AFFF is managed in compatible containers that are in good condition. The purpose of this exemption is to ensure that both active and prospective participants in the perfluoroalkyl and polyfluoroalkyl substances take-back program are not disincentivized from doing so. The amendments retain the existing container requirements.

Compliance with the registration and certificate program, the restrictions surrounding certain uses of PFAS AFFF, the additional reporting requirements which pertain to self certification and water quality

685 spills hotline, capture requirements for the containment of finished PFAS AFFF during use, and the safe
686 storage requirements for the storage of spent PFAS AFFF and any associated waste is mandatory, not
687 voluntary. Therefore, to ensure that these rules for persons using or storing one or more gallons of PFAS
688 AFFF are effective and efficient, the proposed amendments establish mandatory requirements, which are
689 subject to penalties for non-compliance. In accordance with C.R.S. 25-5-1307, persons who violate any of
690 the requirements of Part 267, Subpart Q shall be subject to enforcement, including the possible
691 assessment of a civil penalty not to exceed five thousand dollars for each violation in the case of a first
692 offense. A manufacturer or a person who violates this part 13 repeatedly is subject to a civil penalty not to
693 exceed ten thousand dollars for each repeat offense.

694

695 These amendments are more stringent than the federal regulations, which do not contain these
696 requirementsAdd final SBP Language

An Act

HOUSE BILL 22-1345

BY REPRESENTATIVE(S) Cutter and Bradfield, Amabile, Bacon, Bernett, Bird, Boesenecker, Duran, Exum, Froelich, Hooton, Jodeh, Kipp, Lindsay, Lontine, McCormick, Michaelson Jenet, Ricks, Sirota, Sullivan, Titone, Valdez A., Herod, Kennedy, McLachlan, Snyder, Tipper, Woodrow; also SENATOR(S) Gonzales and Lee, Bridges, Buckner, Danielson, Donovan, Fields, Hansen, Jaquez Lewis, Kolker, Moreno, Pettersen, Story, Winter, Zenzinger, Fenberg.

CONCERNING MEASURES TO INCREASE PROTECTIONS FROM
PERFLUOROALKYL AND POLYFLUOROALKYL CHEMICALS.

Be it enacted by the General Assembly of the State of Colorado:

SECTION 1. In Colorado Revised Statutes, **add** part 6 to article 15 of title 25 as follows:

PART 6 PERFLUOROALKYL AND POLYFLUOROALKYL CHEMICALS

25-15-601. Short title. THE SHORT TITLE OF THIS PART 6 IS THE "PERFLUOROALKYL AND POLYFLUOROALKYL CHEMICALS CONSUMER PROTECTION ACT".

Capital letters or bold & italic numbers indicate new material added to existing law; dashes through words or numbers indicate deletions from existing law and such material is not part of the act.

25-15-602. Legislative declaration. (1) THE GENERAL ASSEMBLY HEREBY FINDS AND DECLARES THAT:

(a) CONTAMINATION OF THE SOIL AND WATER IN THE STATE FROM PFAS CHEMICALS POSES A SIGNIFICANT THREAT TO THE ENVIRONMENT OF THE STATE AND THE HEALTH OF ITS RESIDENTS;

(b) A GROWING BODY OF SCIENTIFIC RESEARCH HAS FOUND THAT EXPOSURE TO PFAS CHEMICALS MAY LEAD TO SERIOUS AND HARMFUL HEALTH EFFECTS;

(c) THE FULL EXTENT OF THE CONTAMINATION OF PFAS CHEMICALS IN THE SOIL AND WATER OF THE STATE IS NOT CURRENTLY KNOWN BUT IS ANTICIPATED TO BE WIDESPREAD AND TO REQUIRE A SIGNIFICANT EXPENDITURE OF RESOURCES TO BE IDENTIFIED AND REMEDIATED;

(d) PFAS CHEMICALS CONTINUE TO BE USED IN PRODUCTS ACROSS A VARIETY OF INDUSTRIES AND FOR MANY DIFFERENT PURPOSES;

(e) PFAS CHEMICALS ARE NOT NECESSARY IN MANY PRODUCTS AND COULD BE REPLACED WITH LESS HARMFUL CHEMICALS OR TECHNOLOGIES; AND

(f) IF THE WIDESPREAD SALE AND DISTRIBUTION OF PRODUCTS THAT CONTAIN INTENTIONALLY ADDED PFAS CHEMICALS CONTINUES IN THE STATE:

(I) THERE IS A LARGER RISK OF PFAS CHEMICALS MIGRATING INTO THE NATURAL ENVIRONMENT;

(II) RESIDENTS OF THE STATE WILL LIKELY SUFFER ADVERSE HEALTH EFFECTS FROM EXPOSURE TO PFAS CHEMICALS; AND

(III) THE STATE AND LOCAL COMMUNITIES WILL BE BURDENED WITH THE TESTING, MONITORING, AND CLEAN-UP COSTS NECESSARY TO KEEP RESIDENTS SAFE FROM EXPOSURE TO PFAS CHEMICALS.

(2) THE GENERAL ASSEMBLY THEREFORE DETERMINES AND DECLARES THAT IT IS IMPERATIVE FOR THE HEALTH AND SAFETY OF THE

STATE'S RESIDENTS TO CREATE A REGULATORY SCHEME THAT PHASES OUT THE SALE OR DISTRIBUTION OF CERTAIN PRODUCTS AND PRODUCT CATEGORIES IN THE STATE THAT CONTAIN INTENTIONALLY ADDED PFAS CHEMICALS.

25-15-603. Definitions - repeal. AS USED IN THIS PART 6, UNLESS THE CONTEXT OTHERWISE REQUIRES:

(1) "ADULT MATTRESS" MEANS A MATTRESS PRODUCT THAT IS NOT A CRIB OR A TODDLER MATTRESS.

(2) "CARPET OR RUG" MEANS A FABRIC PRODUCT MARKETING OR INTENDED FOR USE AS A FLOOR COVERING IN HOUSEHOLDS OR BUSINESSES.

(3) "CONSUMER" MEANS THE END USER OF A PRODUCT.

(4)(a) "COOKWARE" MEANS A DURABLE HOUSEWARE PRODUCT THAT IS USED IN RESIDENCES OR KITCHENS TO PREPARE, DISPENSE, OR STORE FOOD OR BEVERAGES.

(b) "COOKWARE" INCLUDES POTS, PANS, SKILLET, GRILLS, BAKING SHEETS, BAKING MOLDS, TRAYS, BOWLS, AND COOKING UTENSILS.

(5)(a) "COSMETIC" MEANS A PRODUCT THAT IS INTENDED TO BE RUBBED OR INTRODUCED INTO; POURED, SPRINKLED, OR SPRAYED ON; OR OTHERWISE APPLIED TO THE HUMAN BODY FOR CLEANING, CLEANSING, BEAUTIFYING, PROMOTING ATTRACTIVENESS, OR ALTERING THE APPEARANCE.

(b) "COSMETIC" INCLUDES A SKIN MOISTURIZER, PERFUME, LIPSTICK, NAIL POLISH, EYE OR FACIAL MAKEUP PREPARATION, SHAMPOO, CONDITIONER, PERMANENT WAVE, HAIR DYE, AND DEODORANT.

(c) "COSMETIC" DOES NOT INCLUDE A PRODUCT THAT REQUIRES A PRESCRIPTION FOR DISTRIBUTION OR DISPENSATION.

(d)(I) "COSMETIC" DOES NOT INCLUDE HYDROFLUOROOLEFINS USED AS PROPELLANTS IN COSMETICS.

(II) THIS SUBSECTION (5)(d) IS REPEALED EFFECTIVE JANUARY 1,

2027.

(6) "DEPARTMENT" MEANS THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT.

(7) "DRILLING FLUID" MEANS A FLUID THAT IS CIRCULATED INTO THE BOREHOLE OF A WELL TO LUBRICATE AND COOL THE DRILL BIT.

(8) "EXECUTIVE DIRECTOR" MEANS THE EXECUTIVE DIRECTOR OF THE DEPARTMENT OR THE EXECUTIVE DIRECTOR'S DESIGNEE.

(9)(a) "FABRIC TREATMENT" MEANS A PRODUCT APPLIED TO FABRIC TO GIVE THE FABRIC ONE OR MORE CHARACTERISTICS, INCLUDING STAIN RESISTANCE AND WATER RESISTANCE.

(b) (I) "FABRIC TREATMENT" DOES NOT INCLUDE HYDROFLUOROOLEFINS USED AS PROPELLANTS IN FABRIC TREATMENTS.

(II) THIS SUBSECTION (9)(b) IS REPEALED EFFECTIVE JANUARY 1, 2027.

(10) "FOOD PACKAGE" OR "FOOD PACKAGING" MEANS A PACKAGE OR PACKAGING COMPONENT USED IN DIRECT CONTACT WITH FOOD AND THAT IS COMPOSED, IN SUBSTANTIAL PART, OF PAPER, PAPERBOARD, OR OTHER MATERIALS ORIGINALLY DERIVED FROM PLANT FIBERS.

(11) "HYDRAULIC FRACTURING FLUID" MEANS THE FLUID, INCLUDING THE APPLICABLE BASE FLUID AND ANY ADDITIVES, INJECTED INTO AN OIL OR GAS WELL TO PERFORM HYDRAULIC FRACTURING OPERATIONS.

(12)(a) "INTENTIONALLY ADDED PFAS CHEMICALS" MEANS PFAS CHEMICALS THAT A MANUFACTURER HAS INTENTIONALLY ADDED TO A PRODUCT AND THAT HAVE A FUNCTIONAL OR TECHNICAL EFFECT ON THE PRODUCT.

(b) "INTENTIONALLY ADDED PFAS CHEMICALS" INCLUDES PFAS CHEMICALS THAT ARE INTENTIONAL BREAKDOWN PRODUCTS OF AN ADDED CHEMICAL.

(13)(a) "JUVENILE PRODUCT" MEANS A PRODUCT DESIGNED FOR USE

BY INFANTS OR CHILDREN UNDER TWELVE YEARS OF AGE.

(b) "JUVENILE PRODUCT" INCLUDES:

(I) BASSINETS AND OTHER BEDSIDE SLEEPERS;

(II) BOOSTER SEATS, CAR SEATS, AND OTHER CHILD RESTRAINT SYSTEMS;

(III) CHANGING PADS;

(IV) CO-SLEEPERS;

(V) CRIB OR TODDLER MATTRESSES;

(VI) FLOOR PLAY MATS;

(VII) HIGHCHAIRS AND HIGHCHAIR PADS;

(VIII) INFANT BOUNCERS;

(IX) INFANT CARRIERS;

(X) INFANT OR TODDLER FOAM PILLOWS;

(XI) INFANT SEATS;

(XII) INFANT SLEEP POSITIONERS;

(XIII) INFANT SWINGS;

(XIV) INFANT TRAVEL BEDS;

(XV) INFANT WALKERS;

(XVI) NAP COTS;

(XVII) NURSING PADS AND PILLOWS;

(XVIII) PLAY MATS;

(XIX) PLAYPENS;

(XX) PLAY YARDS;

(XXI) POLYURETHANE FOAM MATS, PADS, OR PILLOWS;

(XXII) PORTABLE FOAM NAP MATS;

(XXIII) PORTABLE INFANT SLEEPERS AND HOOK-ON CHAIRS;

(XXIV) SOFT-SIDED PORTABLE CRIBS; AND

(XXV) STROLLERS.

(c) "JUVENILE PRODUCT" DOES NOT INCLUDE:

(I) ELECTRONIC PRODUCTS, INCLUDING:

(A) PERSONAL COMPUTERS AND ANY ASSOCIATED EQUIPMENT;

(B) AUDIO AND VIDEO EQUIPMENT;

(C) CALCULATORS;

(D) WIRELESS PHONES;

(E) GAMING CONSOLES;

(F) HANDHELD DEVICES INCORPORATING A VIDEO SCREEN; AND

(G) ANY ASSOCIATED PERIPHERAL DEVICE SUCH AS A MOUSE, KEYBOARD, POWER SUPPLY UNIT, OR POWER CORD;

(II) AN INTERNAL COMPONENT OF A JUVENILE PRODUCT THAT WOULD NOT COME INTO DIRECT CONTACT WITH A CHILD'S SKIN OR MOUTH DURING REASONABLY FORESEEABLE USE AND ABUSE OF THE PRODUCT; OR

(III) ADULT MATTRESSES.

(14) (a) "MANUFACTURER" MEANS THE PERSON THAT

MANUFACTURES OR ASSEMBLES A PRODUCT OR WHOSE BRAND NAME IS AFFIXED TO A PRODUCT.

(b) "MANUFACTURER" INCLUDES, IF A PRODUCT IS IMPORTED INTO THE UNITED STATES AND THE MANUFACTURER DOES NOT HAVE A PRESENCE IN THE UNITED STATES, THE IMPORTER OR FIRST DOMESTIC DISTRIBUTOR OF THE PRODUCT.

(15) "OIL AND GAS OPERATIONS" HAS THE MEANING SET FORTH IN SECTION 34-60-103 (6.5).

(16) "OIL AND GAS PRODUCTS" MEANS HYDRAULIC FRACTURING FLUIDS, DRILLING FLUIDS, AND PROPPANTS.

(17) "PACKAGE" MEANS MATERIAL THAT IS INTENDED OR USED TO CONTAIN, PROTECT, HANDLE, DELIVER, OR PRESENT A PRODUCT.

(18) "PACKAGING COMPONENT" MEANS AN INDIVIDUAL PART OF A PACKAGE, INCLUDING INTERIOR OR EXTERIOR BLOCKING, BRACING, CUSHIONING, WEATHERPROOFING, EXTERIOR STRAPPING, COATINGS, CLOSURES, INKS, AND LABELS.

(19) "PFAS CHEMICALS" HAS THE MEANING SET FORTH IN SECTION 25-5-1302 (7).

(20) (a) "PRODUCT" MEANS AN ITEM THAT IS MANUFACTURED, ASSEMBLED, OR OTHERWISE PREPARED FOR SALE OR DISTRIBUTION TO CONSUMERS AND THAT IS SOLD OR DISTRIBUTED FOR PERSONAL, RESIDENTIAL, COMMERCIAL, OR INDUSTRIAL USE, INCLUDING FOR USE IN MAKING OTHER PRODUCTS.

(b) "PRODUCT" INCLUDES ANY PRODUCT COMPONENTS.

(c) "PRODUCT" DOES NOT INCLUDE:

(I) DRUGS, MEDICAL DEVICES, BIOLOGICS, OR DIAGNOSTICS APPROVED OR AUTHORIZED BY THE FEDERAL FOOD AND DRUG ADMINISTRATION OR THE FEDERAL DEPARTMENT OF AGRICULTURE; OR

(II) VETERINARY PESTICIDE PRODUCTS APPROVED BY THE FEDERAL

ENVIRONMENTAL PROTECTION AGENCY FOR USE IN ANIMALS; OR

(III) PACKAGING USED FOR THE PRODUCTS DESCRIBED IN SUBSECTIONS (20)(c)(I) AND (20)(c)(II) OF THIS SECTION.

(d) "PRODUCT" DOES NOT INCLUDE A USED PRODUCT OFFERED FOR SALE OR RESALE.

(21) "PRODUCT CATEGORY" MEANS A CLASS OR DIVISION OF PRODUCTS THAT SHARE RELATED CHARACTERISTICS.

(22) "PRODUCT COMPONENT" MEANS AN IDENTIFIABLE COMPONENT OF A PRODUCT, REGARDLESS OF WHETHER THE MANUFACTURER OF THE PRODUCT IS THE MANUFACTURER OF THE COMPONENT.

(23) "PROPPANTS" MEANS MATERIALS THAT ARE INSERTED OR INJECTED INTO AN UNDERGROUND GEOLOGIC FORMATION DURING OIL AND GAS OPERATIONS IN ORDER TO PREVENT FRACTURES FROM CLOSING.

(24)(a) "TEXTILE" MEANS ANY PRODUCT MADE IN WHOLE OR IN PART FROM A NATURAL OR SYNTHETIC FIBER, YARN, OR FABRIC.

(b) "TEXTILE" INCLUDES LEATHER, COTTON, SILK, JUTE, HEMP, WOOL, NYLON, AND POLYESTER.

(c) "TEXTILE" DOES NOT INCLUDE TEXTILES USED IN MEDICAL, PROFESSIONAL, OR INDUSTRIAL SETTINGS.

(25) (a) "TEXTILE FURNISHINGS" MEANS TEXTILES OF A TYPE CUSTOMARILY USED IN HOUSEHOLDS AND BUSINESSES, INCLUDING DRAPERIES, FLOOR COVERINGS, FURNISHINGS, BEDDING, TOWELS, AND TABLECLOTHS.

(b) "TEXTILE FURNISHINGS" DOES NOT INCLUDE TEXTILE FURNISHINGS USED IN MEDICAL, PROFESSIONAL, OR INDUSTRIAL SETTINGS.

(26) "UPHOLSTERED FURNITURE" MEANS ANY ARTICLE OF FURNITURE THAT IS:

(a) DESIGNED FOR SITTING, RESTING, OR RECLINING; AND

(b) WHOLLY OR PARTIALLY STUFFED WITH FILLING MATERIAL.

25-15-604. Prohibition on the sale or distribution of certain consumer products that contain intentionally added PFAS chemicals - product label requirements for cookware. (1) ON AND AFTER JANUARY 1, 2024, A PERSON SHALL NOT SELL, OFFER FOR SALE, DISTRIBUTE FOR SALE, OR DISTRIBUTE FOR USE IN THE STATE ANY PRODUCT IN ANY OF THE FOLLOWING PRODUCT CATEGORIES IF THE PRODUCT CONTAINS INTENTIONALLY ADDED PFAS CHEMICALS:

- (a) CARPETS OR RUGS;
- (b) FABRIC TREATMENTS;
- (c) FOOD PACKAGING;
- (d) JUVENILE PRODUCTS; AND
- (e) OIL AND GAS PRODUCTS.

(2) (a) ON AND AFTER JANUARY 1, 2024, A MANUFACTURER OF COOKWARE SOLD IN THE STATE THAT CONTAINS INTENTIONALLY ADDED PFAS CHEMICALS IN THE HANDLE OF THE PRODUCT OR IN ANY PRODUCT SURFACE THAT COMES INTO CONTACT WITH FOOD, FOODSTUFFS, OR BEVERAGES SHALL LIST THE PRESENCE OF PFAS CHEMICALS ON THE PRODUCT LABEL AND SHALL INCLUDE ON THE PRODUCT LABEL A STATEMENT, IN BOTH ENGLISH AND SPANISH, THAT READS: "FOR MORE INFORMATION ABOUT PFAS CHEMICALS IN THIS PRODUCT, VISIT" FOLLOWED BY BOTH OF THE FOLLOWING:

(I) AN INTERNET WEBSITE ADDRESS FOR A WEB PAGE THAT PROVIDES INFORMATION ABOUT WHY THE PFAS CHEMICALS ARE INTENTIONALLY ADDED; AND

(II) A QUICK RESPONSE (QR) CODE OR OTHER MACHINE-READABLE CODE, CONSISTING OF AN ARRAY OF SQUARES, USED FOR STORING AN INTERNET WEBSITE FOR A WEB PAGE THAT PROVIDES INFORMATION ABOUT WHY THE PFAS CHEMICALS ARE INTENTIONALLY ADDED.

(b) A MANUFACTURER OF COOKWARE SOLD IN THE STATE SHALL

ENSURE THAT THE STATEMENT REQUIRED ON THE PRODUCT LABEL BY SUBSECTION (2)(a) OF THIS SECTION IS VISIBLE AND LEGIBLE TO THE CONSUMER, INCLUDING ON THE PRODUCT LISTING FOR ONLINE SALES.

(c) COOKWARE THAT MEETS BOTH OF THE FOLLOWING REQUIREMENTS IS EXEMPT FROM THE REQUIREMENT OF THIS SUBSECTION (2):

(I) THE SURFACE AREA OF THE COOKWARE CANNOT FIT A PRODUCT LABEL OF AT LEAST TWO SQUARE INCHES; AND

(II) THE COOKWARE DOES NOT HAVE EITHER OF THE FOLLOWING:

(A) AN EXTERIOR CONTAINER OR WRAPPER ON WHICH A PRODUCT LABEL CAN APPEAR OR BE AFFIXED; AND

(B) A TAG OR OTHER ATTACHMENT WITH INFORMATION ABOUT THE PRODUCT ATTACHED TO THE COOKWARE.

(d) A MANUFACTURER OF COOKWARE SOLD IN THE STATE SHALL ENSURE THAT THE STATEMENT OTHERWISE REQUIRED ON THE PRODUCT LABEL BY SUBSECTION (2)(a) OF THIS SECTION IS INCLUDED ON THE PRODUCT LISTING FOR ONLINE SALES PURSUANT TO SUBSECTION (2)(b) OF THIS SECTION.

(e) ON AND AFTER JANUARY 1, 2024, A MANUFACTURER SHALL NOT MAKE A CLAIM, ON THE COOKWARE PACKAGE, THAT THE COOKWARE IS FREE OF ANY PFAS CHEMICALS UNLESS NO INDIVIDUAL PFAS CHEMICAL IS INTENTIONALLY ADDED TO THE COOKWARE.

(f) COOKWARE THAT CONTAINS ONE OR MORE INTENTIONALLY ADDED PFAS CHEMICALS IN THE HANDLE OF THE PRODUCT OR IN ANY PRODUCT SURFACE THAT COMES INTO CONTACT WITH FOOD, FOODSTUFFS, OR BEVERAGES SHALL NOT BE SOLD, OFFERED FOR SALE, OR DISTRIBUTED IN THE STATE UNLESS THE COOKWARE AND THE MANUFACTURER OF THE COOKWARE COMPLY WITH THIS PART 6.

(3) ON AND AFTER JANUARY 1, 2025, A PERSON SHALL NOT SELL, OFFER FOR SALE, DISTRIBUTE FOR SALE, OR DISTRIBUTE FOR USE THE FOLLOWING PRODUCTS THAT CONTAIN INTENTIONALLY ADDED PFAS CHEMICALS:

- (a) COSMETICS;
- (b) INDOOR TEXTILE FURNISHINGS; AND
- (c) INDOOR UPHOLSTERED FURNITURE.

(4) ON AND AFTER JANUARY 1, 2027, A PERSON SHALL NOT SELL, OFFER FOR SALE, DISTRIBUTE FOR SALE, OR DISTRIBUTE FOR USE THE FOLLOWING PRODUCTS THAT CONTAIN INTENTIONALLY ADDED PFAS CHEMICALS:

- (a) OUTDOOR TEXTILE FURNISHINGS; AND
- (b) OUTDOOR UPHOLSTERED FURNITURE.

SECTION 2. In Colorado Revised Statutes, 24-103-904, **amend** (1) as follows:

24-103-904. Purchasing preference for environmentally preferable products - definitions. (1) As used in this section, unless the context otherwise requires:

(a) "Environmentally preferable products" means products, INCLUDING PRODUCTS THAT DO NOT CONTAIN INTENTIONALLY ADDED PFAS CHEMICALS, that have a lesser or reduced adverse effect on human health and the environment when compared with competing products that serve the same purpose. The product comparison may consider such factors as the availability of any raw materials used in the product being purchased and the availability, use, production, safe operation, maintenance, packaging, distribution, disposal, or recyclability of the product being purchased.

(b) "INTENTIONALLY ADDED PFAS CHEMICALS" HAS THE MEANING SET FORTH IN SECTION 25-15-603 (12).

SECTION 3. In Colorado Revised Statutes, 25-5-1302, **add** (1.5), (3.6), (5.8), (7.5), (9), and (10) as follows:

25-5-1302. Definitions. As used in this part 13, unless the context otherwise requires:

(1.5) "CLASS B FIRE" MEANS A FIRE INVOLVING FLAMMABLE LIQUIDS OR GASES, INCLUDING PETROLEUM, PAINT, ALCOHOL, SOLVENT, OIL, AND TAR.

(3.6) "EXECUTIVE DIRECTOR" MEANS THE EXECUTIVE DIRECTOR OF THE DEPARTMENT OR THE EXECUTIVE DIRECTOR'S DESIGNEE.

(5.8) "INTENTIONALLY ADDED PFAS CHEMICALS" HAS THE MEANING SET FORTH IN SECTION 25-15-603 (12).

(7.5) "RELEASE" MEANS ANY SPILLING, LEAKING, PUMPING, POURING, EMPTYING, DISCHARGING, INJECTING, ESCAPING, LEACHING, DUMPING, OR DISPOSING OF A CHEMICAL INTO THE ENVIRONMENT.

(9) "TERMINAL" MEANS A FACILITY THAT ENGAGES IN THE WHOLESALE DISTRIBUTION OF CRUDE PETROLEUM AND PETROLEUM PRODUCTS, INCLUDING LIQUIFIED PETROLEUM GAS FROM BULK LIQUID STORAGE FACILITIES.

(10) "WATER QUALITY SPILLS HOTLINE" MEANS THE PHONE SYSTEM CREATED AND MAINTAINED BY THE DEPARTMENT FOR THE REPORTING OF SPILLS OR DISCHARGES INTO STATE WATERS TO THE DEPARTMENT.

SECTION 4. In Colorado Revised Statutes, **add** 25-5-1303.5 as follows:

25-5-1303.5. Restriction on use of certain firefighting foams.

(1) BEGINNING JANUARY 1, 2024, A PERSON THAT USES CLASS B FIREFIGHTING FOAM CONTAINING INTENTIONALLY ADDED PFAS CHEMICALS SHALL:

(a) NOT ALLOW A RELEASE OF THE CLASS B FIREFIGHTING FOAM;

(b) FULLY CONTAIN THE CLASS B FIREFIGHTING FOAM BY IMPLEMENTING APPROPRIATE CONTAINMENT MEASURES, WHICH MAY INCLUDE BUNDS AND PONDS, THAT:

(I) ARE CONTROLLED;

(II) ARE IMPERVIOUS TO PFAS CHEMICALS; AND

(III) DO NOT ALLOW THE CLASS B FIREFIGHTING FOAM OR ANY ASSOCIATED FIREWATER, WASTEWATER, RUNOFF, OR OTHER WASTE TO BE RELEASED;

(c) SAFELY STORE ALL CLASS B FIREFIGHTING FOAM AND ANY ASSOCIATED FIREWATER, WASTEWATER, RUNOFF, AND OTHER WASTE IN A WAY THAT PREVENTS THEIR RELEASE UNTIL THE FEDERAL ENVIRONMENTAL PROTECTION AGENCY HAS PUBLISHED GUIDANCE ON THE PROPER DISPOSAL AND DESTRUCTION METHODS FOR PFAS CHEMICALS. AFTER THE FEDERAL ENVIRONMENTAL PROTECTION AGENCY HAS PUBLISHED GUIDANCE ON THE PROPER DISPOSAL AND DESTRUCTION METHODS FOR PFAS CHEMICALS, THE PERSON THAT USES THE CLASS B FIREFIGHTING FOAM CONTAINING INTENTIONALLY ADDED PFAS CHEMICALS SHALL DISPOSE OF AND DESTROY THE CLASS B FIREFIGHTING FOAM IN ACCORDANCE WITH SUCH GUIDANCE.

(d) IF THERE IS A RELEASE OF THE CLASS B FIREFIGHTING FOAM OR ANY ASSOCIATED FIREWATER, WASTEWATER, RUNOFF, OR OTHER WASTE, REPORT THE FOLLOWING INFORMATION TO THE WATER QUALITY SPILLS HOTLINE WITHIN TWENTY-FOUR HOURS AFTER ITS RELEASE:

(I) THE TRADE NAME AND PRODUCT NAME OF THE CLASS B FIREFIGHTING FOAM;

(II) THE QUANTITY OF CLASS B FIREFIGHTING FOAM USED THAT CONTAINS INTENTIONALLY ADDED PFAS CHEMICALS;

(III) THE AMOUNT AND TYPE OF PFAS CHEMICALS IN THE CLASS B FIREFIGHTING FOAM; AND

(IV) THE AMOUNT OF CLASS B FIREFIGHTING FOAM OR ANY ASSOCIATED FIREWATER, WASTEWATER, RUNOFF, AND OTHER WASTE THAT IS RELEASED; AND

(e) DOCUMENT ANY MEASURES UNDERTAKEN PURSUANT TO THE REQUIREMENTS OF THIS SECTION. IN INVESTIGATING COMPLIANCE WITH THE REQUIREMENTS OF THIS SECTION, THE ATTORNEY GENERAL MAY REQUEST THAT THE PERSON PROVIDE THE DOCUMENTATION CREATED PURSUANT TO THE REQUIREMENTS OF THIS SUBSECTION (1)(e) TO THE ATTORNEY GENERAL.

(2) BEGINNING JANUARY 1, 2024, A PERSON THAT USES CLASS B

FIREFIGHTING FOAM THAT CONTAINS INTENTIONALLY ADDED PFAS CHEMICALS MUST REPORT THE USE OF THE CLASS B FIREFIGHTING FOAM TO THE WATER QUALITY SPILLS HOTLINE WITHIN TWENTY-FOUR HOURS AFTER ITS USE.

(3) (a) EXCEPT AS PROVIDED IN SUBSECTION (3)(b) OF THIS SECTION, THE RESTRICTIONS AND REQUIREMENTS IN SUBSECTIONS (1) AND (2) OF THIS SECTION DO NOT APPLY TO THE USE OF CLASS B FIREFIGHTING FOAM WHERE THE INCLUSION OF PFAS CHEMICALS IS REQUIRED OR AUTHORIZED BY FEDERAL LAW, INCLUDING 14 CFR 139, OR IMPLEMENTED IN ACCORDANCE WITH FEDERAL AVIATION ADMINISTRATION GUIDANCE, OR OTHERWISE REQUIRED FOR A MILITARY PURPOSE.

(b) IF THE EXECUTIVE DIRECTOR DETERMINES BY RULE THAT THE LAWS, GUIDANCE, OR REQUIREMENTS DESCRIBED IN SUBSECTION (3)(a) OF THIS SECTION NO LONGER APPLY TO A PARTICULAR INDUSTRY OR SECTOR, THE EXECUTIVE DIRECTOR SHALL PROVIDE NOTICE ON THE DEPARTMENT'S WEBSITE OF THIS DETERMINATION AND SHALL PROMULGATE RULES PROHIBITING USERS OF CLASS B FIREFIGHTING FOAM WITHIN THAT INDUSTRY OR SECTOR FROM USING CLASS B FIREFIGHTING FOAM IN VIOLATION OF THIS SECTION, WHICH RULES SHALL APPLY NO SOONER THAN TWO YEARS AFTER THE EXECUTIVE DIRECTOR'S DETERMINATION.

SECTION 5. In Colorado Revised Statutes, **amend** 25-5-1307 as follows:

25-5-1307. Civil penalty. (1) A manufacturer or a person who violates ~~the provisions of~~ this part 13 is subject to a civil penalty not to exceed five thousand dollars for each violation in the case of a first offense. A manufacturer or a person who violates this part 13 repeatedly is subject to a civil penalty not to exceed ten thousand dollars for each repeat offense. Penalties collected under this part 13 must be deposited in the local firefighter safety and disease prevention fund created in section 24-33.5-1231.

(2) THE ATTORNEY GENERAL HAS THE AUTHORITY TO ENFORCE THIS PART 13 AND TO CONDUCT CIVIL INVESTIGATIONS AND BRING CIVIL ACTIONS FOR VIOLATIONS OF THIS PART 13.

SECTION 6. In Colorado Revised Statutes, 25-5-1309, **amend** (1)

introductory portion as follows:

25-5-1309. Restriction on the use of certain firefighting foam at certain airports - definitions. (1) Beginning January 1, ~~2023~~ 2024, the use of class B firefighting foam that contains intentionally added perfluoroalkyl and polyfluoroalkyl substances shall be prohibited at structures used for the storage or maintenance of aircraft where the structure is located in an airport that:

SECTION 7. Safety clause. The general assembly hereby finds,

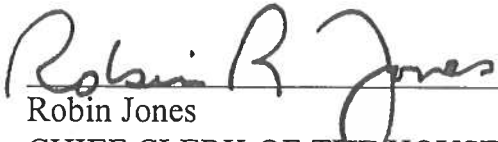
determines, and declares that this act is necessary for the immediate preservation of the public peace, health, or safety.



Alec Garnett
SPEAKER OF THE HOUSE
OF REPRESENTATIVES



Steve Fenberg
PRESIDENT OF
THE SENATE



Robin Jones
CHIEF CLERK OF THE HOUSE
OF REPRESENTATIVES



Cindi L. Markwell
SECRETARY OF
THE SENATE

APPROVED June 3, 2022 at 9:05 am
(Date and Time)



Jared S. Polis

GOVERNOR OF THE STATE OF COLORADO

Notice of Proposed Rulemaking

Tracking number

2024-00029

Department

1200 - Department of Agriculture

Agency

1203 - Plant Industry Division

CCR number

8 CCR 1203-2

Rule title

RULES AND REGULATIONS PERTAINING TO THE ADMINISTRATION AND ENFORCEMENT OF THE PESTICIDE APPLICATORS' ACT

Rulemaking Hearing**Date**

02/22/2024

Time

09:00 AM

Location

via Zoom - link is contained in the hearing notice

Subjects and issues involved

The purpose of these Rule revisions is to further clarify new federal certification categories pursuant to 40 C.F.R. Part 171. Specifically, the revisions to the Rules parts 2.61(b), 8.01(m) and 10.01(i) to separate the 309 Soil / Non-soil fumigation category into subcategories that specifically address soil and non-soil fumigation applications and part 8.01(l)(1) to remove the word agricultural from the category 114, Aerial Pest Control category definition.

Statutory authority

35-10-118(2)(a) (d), (3)(a) (c), (4), (5) and (9), C.R.S.

Contact information**Name**

Hollis Glenn

Title

Deputy Commissioner of Operations

Telephone

720.560.6286

Email

hollis.glenn@state.co.us



NOTICE OF PUBLIC RULEMAKING HEARING

FOR AMENDMENTS TO

“Rules And Regulations Pertaining To The Administration And Enforcement Of The Pesticide Applicators’ Act”

8 CCR 1203-2, Parts 2, 8, and 10

Notice is hereby given pursuant to § 24-4-103 C.R.S. that the Department of Agriculture will hold a public rulemaking hearing:

DATE: February 22, 2024
TIME: 9:00 a.m.
LOCATION: This hearing will be held via [Zoom](#)
CALL INFORMATION: 1-719-359-4580
Meeting ID: 841 9093 3803
Passcode: 714324

In order to maintain a proper hearing record you are encouraged to pre-register by completing this [Google form](#). If you do not have access to Google you may send your name and telephone number to Hollis.Glenn@state.co.us
Pre-registration is not required to participate in the hearing.

The purpose of these Rule revisions is to further clarify new federal certification categories pursuant to 40 C.F.R. Part 171. Specifically, the revisions to the Rules parts 2.61(b), 8.01(m) and 10.01(i) to separate the 309 Soil / Non-soil fumigation category into subcategories that specifically address soil and non-soil fumigation applications and part 8.01(l)(1) to remove the word “agricultural” from the category 114, Aerial Pest Control category definition.

The statutory authority for these rules is §§ 35-10-118(2)(a) – (d), (3)(a) – (c), (4), (5) and (9), C.R.S.

Any interested party may file written comment with the Commissioner’s office prior to the hearing, or present at the aforementioned hearing written data, views or arguments. Emailed comments should be sent to the hearing officer at Hollis.Glenn@state.co.us. A copy of the proposed rule is available on the Department of Agriculture’s website at www.colorado.gov/ag or may be obtained by calling 720-560-6286. The proposed rule shall be available for public inspection at the Colorado Department of Agriculture at 305 Interlocken Parkway, Broomfield, Colorado during regular business hours.



DEPARTMENT OF AGRICULTURE

Plant Industry Division

RULES AND REGULATIONS PERTAINING TO THE ADMINISTRATION AND ENFORCEMENT OF THE PESTICIDE APPLICATORS' ACT

8 CCR 1203-2

Part 2. The Licensing System.

Subpart A Commercial Applicators

- 2.01. A person engaged in the business of applying pesticides must be licensed as a commercial applicator under the Act. To be licensed or to renew a license as a commercial applicator, any designated qualified supervisor(s) must be licensed in good standing in the category for which a commercial applicator's license is sought.
- 2.02. A person not engaged in the business of applying pesticides is not required to be licensed as a commercial applicator under the Act. For example, a person who evaluates and/or recommends pest controls while not engaging in the business of applying pesticides or working for a person who engages in the business of applying pesticides is not required to be licensed under the Act.
- 2.03. Each applicant for a license shall submit a signed, complete, accurate, and legible application, on a form provided by the Commissioner, which shall include, at a minimum: the name and address of the business, the name under which the business will operate (the doing business as name), the name of the person who is the primary contact, the address and telephone number of the location where the applicator records are to be kept, the name and identification numbers of all qualified supervisors employed or designated by the business, and any other information required on the form.
- 2.04. In addition to the application form described above, each applicant for a license or applicant for renewal of a license, shall submit the license fee set by the Commissioner. If the license fee does not accompany the application, the application for license or renewal of a license may be denied.
- 2.05. Each person applying as a corporation or other entity shall submit a certificate of good standing from the Secretary of State.
- 2.06. Each applicant shall submit to the Commissioner the name under which the business will operate. If the licensee operates under more than one name, each such name shall be listed with the Commissioner.
- 2.07. Beginning with license year 1994, the annual license fee for commercial applicators shall be \$350.00.
- 2.08. Each applicant for renewal of a license shall annually submit a signed, complete, accurate, and legible application on a form provided by the Commissioner, which shall include, at a minimum: the name and address of the business, the name of the person who is the primary contact, the address and telephone number of the location where the applicator records are to be kept, the name and identification numbers of all qualified supervisors employed by the business, and any other information required on the form.
- 2.09. Each applicant for a license shall provide evidence of liability insurance to the Commissioner.

- 2.10. Each applicant for renewal of a license in all categories shall have on file at the time of submission of an application for renewal of a license evidence of liability insurance which is in force at the time of application.
- 2.11. Each commercial applicator shall have on file with the Commissioner evidence of liability insurance at the time any pesticide application is performed.
- 2.12. Adequate Supervision:
- (a) A licensee must have at least one qualified supervisor for every fifteen (15) technicians, of which no more than eight (8) may be unlicensed technicians. For purposes of the provision, the term “unlicensed technician” means a technician who does not have a certified operator license
 - (b) A responsible qualified supervisor must be available while any technician under their supervision is using a pesticide. For purposes of this provision, the term “available” means able to communicate verbally with the technician and the Department and to respond appropriately to any emergency.
 - (c) A qualified supervisor may act in a supervisory capacity for one or more commercial applicator businesses at any given time, but only for the licensure category(ies) the qualified supervisor holds.
 - (d) A qualified supervisor may supervise one or more technicians employed by multiple commercial applicator businesses, so long as the aggregate number of technicians supervised from among those commercial applicator businesses does not exceed 15 technicians at any one point.
- 2.13. A commercial applicator who conducts business at two or more business locations shall obtain a license for each location at which it employs one or more permanent employees engaged in the application of pesticides for hire. For purposes of this paragraph, “business locations” means any physical location at or through which the functional operations of business regularly occur, including, but not limited to, financial transactions, arrangement of contracts, or assignment of work, and excluding buildings or locations used solely for storage of equipment or supplies or telephone answering services.
- 2.14. A commercial applicator may not apply pesticides aerially without an endorsement on its license by the Commissioner permitting such applications. In order to obtain such endorsement, the applicant or licensee shall present evidence that at least one pilot employed or to be employed by said applicant, currently holds a commercial agricultural aircraft operator certificate issued by the Federal Aviation Administration, U.S. Department of Transportation, pursuant to 14 C.F.R. Part 137 (2017) (as incorporated herein by reference). If the employment of said pilot or pilots is terminated for any reason, the licensee shall immediately cease aerial application of pesticides unless and until it is in compliance with this Rule.
- 2.15. A business not engaged in the business of applying pesticides for hire, and not licensed under the Act, may solicit and enter into a written contract which incidentally requires one or more pesticide applications only in accordance with the provisions of this Part 2.15. Examples of such contracts, but not by way of limitation, are maintenance and paving contracts. If such business hires a licensed commercial applicator to perform the pesticide application as a subcontractor, then the primary contractor need not itself be licensed under the Act. If the primary contractor does not hire a licensed commercial applicator to perform such applications, then the primary contractor must obtain a license prior to entering into the primary contract. Entry into any such contract that does not have an express written statement that the contractor will subcontract with a licensed commercial applicator to perform the pesticide application(s) called for in the contract,

shall constitute a violation of § 35-10-117(1)(c), C.R.S. Failure to include such a statement in any solicitations, whether oral or written, to enter into such a contract shall constitute a separate violation of § 35-10-117(1)(c), C.R.S.

- 2.16. A commercial applicator not licensed in a category ("contractor") may solicit and enter into a written contract with a customer to perform pesticide applications in said category only if the contractor subcontracts with a commercial applicator licensed in said category ("subcontractor") to perform the pesticide application in that category. In this case, the subcontractor shall be responsible for all aspects of the application. If the contractor hires the subcontractor to perform the pesticide application, then the contractor need not itself be licensed in the category. If the contractor does not hire a subcontractor to perform such applications, then the contractor must obtain a license in said category prior to entering into any contract with a customer for any pesticide application in said category. Entry into any such contract that does not have an express written statement that the contractor will subcontract with a subcontractor licensed to perform the pesticide application(s) called for in the contract, shall constitute a violation of § 35-10-117(1)(c), C.R.S. Failure to include such a statement in any solicitation, whether oral or written, to enter into such a contract shall constitute a separate violation of § 35-10-117(1)(c), C.R.S.
- 2.17. A commercial applicator licensed in a category ("contractor") may enter into a contract with a customer to perform pesticide applications in said category. The contractor may subcontract with another commercial applicator licensed in the same category ("subcontractor") to perform the pesticide application under the primary contract. In this case, both the contractor and subcontractor shall be responsible for all aspects of the application. For example and not by way of limitation: both applicators are required to keep records of the application; both applicators are responsible for any notification required under the act or these Rules; and both applicators are responsible for the proper application of any pesticides.

Subpart B Registered Limited Commercial Applicators and Registered Public Applicators

- 2.18. Any person who in the course of conducting a business only in or on property owned or leased by the person or the person's employer ("limited commercial applicator") is engaged in applying restricted use pesticides, and any agency of the state, any county, city and county, or municipality, or any other local governmental entity or political subdivision ("public applicator") which applies restricted use pesticides shall register with the Commissioner.
- 2.19. An entity which does not apply restricted use pesticides but otherwise qualifies as a limited commercial applicator or a public applicator may register with the Commissioner.
- 2.20. A limited commercial applicator or public applicator which exclusively applies general use pesticides is not required to register with the Commissioner unless they have so designated in accordance with Part 2.19.
- 2.21. Any limited commercial applicator or public applicator registered pursuant to the Act and these Rules shall be governed by the Act and these Rules for all pesticide applications including those involving general use pesticides.
- 2.22. The limited commercial applicator or public applicator shall designate on its application one or more individuals, who are or will be employed by it in the capacity of qualified supervisor, to take the examination for each category and subcategory for which the registration is sought.
- 2.23. To be registered as a limited commercial applicator or public applicator, the designated qualified supervisor must be licensed in good standing and must meet all qualifications including, but not limited to, the experience and/or educational qualifications set forth in these Rules for each of the categories in which he or she will take the examination. For purposes of this Part 2.23, the term

“good standing” includes but is not limited to, the fact that the qualified supervisor's license has not expired pursuant to § 35-10-116 (1), C.R.S.

- 2.24. Each applicant for a registration shall submit a signed, complete, accurate, and legible application, on a form provided by the Commissioner, which shall include, at a minimum: the name and address of the applicant, the name of the person who is the primary contact, the address and telephone number of the location where the applicator records are to be kept, the name and identification numbers of all qualified supervisors employed by the applicant, and any other information required on the form.
- 2.25. In addition to the application form described above, each applicant for registration shall submit the registration fee set by the Commissioner. If the registration fee does not accompany the application, the application for registration may be denied.
- 2.26. Each person applying as a corporation or other entity shall submit a certificate of good standing from the Secretary of State.
- 2.27. The registration required pursuant to the Act shall expire on December 31 of the same year the registration is granted.
- 2.28. A registered limited commercial applicator or a registered public applicator may not apply pesticides aerially without an endorsement on its registration by the Commissioner permitting such applications. In order to obtain such endorsement, the limited commercial applicator or a public applicator shall present evidence that at least one pilot employed or to be employed by said limited commercial applicator or a public applicator, currently holds a commercial agricultural aircraft operator certificate issued by the Federal Aviation Administration, U.S. Department of Transportation, pursuant to 14 C.F.R. Part 137 (2017) (as incorporated herein by reference). If the employment of said pilot or pilots is terminated for any reason, the limited commercial applicator or a public applicator shall immediately cease aerial application of pesticides unless and until it is in compliance with this Rule.
- 2.29. A limited commercial entity or a public entity may designate separate sections, divisions, agencies, or their equivalent to be registered.
- 2.30. Adequate Supervision:
 - (a) A registered limited commercial applicator or a registered public applicator must have at least one qualified supervisor for every fifteen (15) technicians, of which no more than eight (8) may be unlicensed technicians. For purposes of the provision, the term “unlicensed technician” means a technician who does not have a certified operator license.
 - (b) A responsible qualified supervisor must be available while any technician under their supervision is using a pesticide. For purposes of this provision, the term “available” means able to communicate verbally with the technician and the Department and to respond appropriately to any emergency.
 - (c) A qualified supervisor may act in a supervisory capacity for one or more commercial applicator businesses at any given time, but only for the licensure category(ies) the qualified supervisor holds.
 - (d) A qualified supervisor may supervise one or more technicians employed by multiple commercial applicator businesses, so long as the aggregate number of technicians supervised from among those commercial applicator businesses does not exceed 15 technicians at any one point.

- 2.31. If before the expiration of a registration, a registered limited commercial applicator or registered public applicator wants to withdraw registration, said applicator may withdraw from registration. Notice of withdrawal must be in writing and is not effective until 10 days from receipt by the Commissioner. If before the original expiration of a registration the applicator wants to be registered, the applicator must submit a new application and submit a new registration fee.

Subpart C Qualified supervisors and certified operators

- 2.32. A person working for a person who is or should be licensed as a commercial applicator, registered limited commercial applicator, or registered public applicator and who without supervision, evaluates pest problems, or recommends pest controls using pesticides, or uses any pesticide, or sells application services, or supervises others in any of these functions must be licensed as a qualified supervisor.
- 2.33. A person who applies any restricted use pesticide without the on-site supervision of a qualified supervisor must be licensed as a certified operator.
- 2.34. Each qualified supervisor and certified operator applying for a license or the renewal of a license must be 18 years of age and shall submit an application on a form provided by the Commissioner prior to the date of expiration of any current license which contains, at a minimum, the following: the applicant's identification number, if any, his or her name, the name, address, telephone number, date of birth, and license or registration number of his or her employer, if any, and any other information required on the form.
- 2.35. The Commissioner may require verification of any fact, including but not limited to, any experience or education claimed on any application, and may investigate the truthfulness and accuracy of any and all information submitted by an applicant.
- 2.36. Upon a showing of exceptional circumstances by an applicant, the Commissioner may waive part of the experience requirements specified in these Rules. The Commissioner may accept, with sufficient verification, valid relevant field experience obtained in this state or any other state.
- 2.37. Each applicant for license as a qualified supervisor or certified operator, shall take and pass a general examination and any examinations required for the category for which the applicant has applied.
- 2.38. Repealed
- 2.39. Except as provided in Part 2.45 of these Rules, each applicant for a license as a qualified supervisor or certified operator shall pay a fee to be determined by the Commissioner. Said fee must be paid separately from any other fee, including but not limited to, any fee for examination as a qualified supervisor or certified operator or any fee for licensure as a commercial applicator.
- 2.40. The qualified supervisor(s) employed by a licensee shall be responsible for the complete supervision of all pest control recommendations, soliciting, mixing, loading, and application of pesticides for the licensee in the licensure category(ies) the qualified supervisor(s) hold(s).
- 2.41. The anniversary date of a qualified supervisor's license or certified operator's license shall be the birth date of the licensee.
- 2.42. Both qualified supervisors and certified operators will be licensed by category and must take and pass both a general exam and a category specific exam.
- 2.43. In order for a licensed qualified supervisor or licensed certified operator to become licensed in additional categories, the applicant must take and pass the examination in the new category.

- 2.44. If a qualified supervisor possesses all of the qualifications for licensure as a qualified supervisor in an additional category for which such person is not licensed, except for the required experience, such person shall be licensed as a certified operator in such additional category without payment of the application fee for the certified operator's license.
- 2.45. If a licensed qualified supervisor or licensed certified operator applies for licensure in an additional category, said qualified supervisor or certified operator shall not be required to pay an additional application fee for licensure in a new category. The applicant shall be required to pay an examination fee.
- 2.46. Any category added after the qualified supervisor or certified operator is originally licensed or renewed shall expire on the date of expiration of the original license.
- 2.47. In order to qualify for renewal of a license, any licensed qualified supervisor or licensed certified operator must either take and pass the general exam and any category specific exams for his category or complete any continuing education required pursuant to Part 4 of these Rules. Any renewal of a license shall be determined on a category basis. Any license that is not renewed on or before the expiration date of the license may be reinstated within one hundred eighty days after the expiration date upon:
- (a) Application and payment of a reinstatement fee as determined by the Commissioner; and
 - (b) Proof that all renewal requirements have been satisfied as of the expiration date of the license.
- 2.48. An individual certified or licensed by another jurisdiction as a commercial pesticide applicator may obtain a certified operator license in Colorado without passing any examination, but only for the unexpired term of the certification or license issued by such other jurisdiction. Application for such licensure shall require proof of current certification or licensure in good standing in the other jurisdiction and payment of an application fee pursuant to Part 2.39. Any application for licensure pursuant to this Part 2.48 may be denied for any reason other than passage of any exam. If issued, said license shall expire on the expiration date of the certification or license issued by the other jurisdiction. Upon the expiration of the license issued pursuant to this Part 2.48, the individual may renew the certification or license issued by the other jurisdiction and re-apply to become a certified operator in Colorado as permitted by this Part 2.48, or apply for a license in Colorado and satisfy all requirements therefore, including, but not limited to, taking and passing each examination applicable to such licensure.

Subpart D Private Applicators

- 2.49. Any person who uses or supervises the use of a restricted use pesticide for purposes of producing any agricultural commodity on property owned or leased by the applicator or the applicator's employer or, if the pesticide is applied without compensation other than trading of personal services between producers of agricultural commodities, on the property of another person must be a licensed private applicator. The holder of a private applicator license is only authorized to use restricted pesticides for the purpose of producing an agricultural commodity as defined in Part 1.02(q).
- 2.50. Each applicant for a private applicator license or renewal of a license must be 18 years of age and shall submit an application on a form provided by the Commissioner, prior to the date of expiration of any current license, which contains, at a minimum, the following: the applicant's identification number, if any, his or her name, address, telephone number, date of birth, photocopy of their identification, and any other information required on the form.

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- 2.51. The Commissioner may require verification of any fact, including but not limited to, type of agricultural commodity production claimed on any application, and may investigate the truthfulness and accuracy of any and all information submitted by an applicant.
- 2.52. Each applicant for a private applicator license shall take and pass an examination.
- 2.53. Each applicant for a private applicator license shall pay a fee to be determined by the Commissioner. Said fee must be paid separately from any other fee, including but not limited to, any fee for examination as a private applicator.
- 2.54. A licensed private applicator shall be responsible for the on-site supervision of any unlicensed private applicator working under his or her direction, who mixes, loads, or applies a restricted use pesticide, for purposes of producing any agricultural commodity on property owned or leased by the applicator or the applicator's employer. For the purposes of this Part 2.54, supervision of any unlicensed person working "under his or her direction" shall mean work performed by an unlicensed individual acting under the instruction and control of a licensed private applicator where that unlicensed individual has met all training, qualifications, and use-specific condition requirements in accordance with 40 C.F.R. § 171.201(b) - (d) (2017) (as incorporated herein by reference) prior to the unlicensed private applicator using a restricted use pesticide under the on-site supervision of a licensed private applicator.
- 2.55. The anniversary date of a private applicator license shall be the birth date of the licensee.
- 2.56. In order for a licensed private applicator to become licensed as a qualified supervisor or certified operator, the applicant must take and pass both a general exam and a category specific exam and meet any requirements outlined in Part 2, Subpart C, of these Rules.
- 2.57. If a licensed private applicator applies for licensure as a qualified supervisor or certified operator, the private applicator shall be required to pay an additional examination fee and application fee for licensure.
- 2.58. In order to qualify for renewal of a license, a licensed private applicator must either take and pass the private applicator exam or complete any continuing education required pursuant to Part 4 of these Rules. A license that is not renewed on or before the expiration date of the license may be reinstated within one hundred eighty days after the expiration date upon:
- (a) Application and payment of a reinstatement fee as determined by the Commissioner; and
 - (b) Proof that all renewal requirements have been satisfied as of the expiration date of the license.
- 2.59. An individual certified or licensed by another jurisdiction outside Colorado as a private applicator may obtain a Colorado private applicator license without passing any examination, but only for the unexpired term of the certification or license issued by such other jurisdiction. Application for such licensure shall require proof of current certification or licensure in good standing in the other jurisdiction and payment of an application fee pursuant to Part 2.53. Said license shall expire on the expiration date of the certification or license issued by the other jurisdiction. Upon the expiration of the license issued pursuant to this Part 2.59, the individual may renew the certification or license issued by the other jurisdiction and re-apply to become a private applicator in Colorado as permitted by this Part 2.59, or apply for a license in Colorado and satisfy all requirements therefore, including, but not limited to, taking and passing an examination applicable to such licensure.
- 2.60. Private pesticide applicator licensure classification: Category 401, Private Pesticide Applicator Pest Control, is for the application of restricted use pesticides for the purpose of producing any
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agricultural commodity on property owned or leased by the applicator or the applicator's employer or, when the pesticide is applied without compensation other than trading of personal services between producers of agricultural commodities, on the property of another person.

2.61. Private applicators making aerial, structural, or soil / non-soil fumigant applications must hold one or more of the following categories that correspond to the application being made in addition to the category 401, Private Pesticide Applicator license:

- (a) Category 114: Aerial Pest Control: The application of pesticides by unmanned aerial vehicle (UAV), fixed or rotary wing aircraft.
 - (1) The Aerial Pest Control category may be obtained by successfully passing an approved Aerial Pest Control Certification examination offered by the Colorado Department of Agriculture or any state with an approved Environmental Protection Agency Certification Plan. Proof of a passing score obtained within the last 12 months with exam results 70% or better must be provided to the Department with the application.
 - (2) A reciprocal Aerial Pest Control license may be issued if the license, issued by a state with an approved Environmental Protection Agency Certification Plan with the equivalent category, is current and in good standing. A reciprocal license will expire on the date of the original issuing state's license.
 - (3) Applicators must obtain at least one (1) Pest Management Continuing Education Credit in Aerial Pest Control prior to the expiration of the license to renew the category. Failure to obtain at least one continuing education credit will result in the expiration of the licensure category and the applicator will be required to retest.
- (b) Category 309A: Soil ~~/Non-Soil~~ Fumigation Pest Control: For the use of a fumigant to control pests in soil ~~or non-soil sites not otherwise addressed in category 303, Structural Fumigation Pest Control.~~
 - (1) The Soil ~~/Non-Soil~~ Fumigation Pest Control category may be obtained by successfully passing the Soil ~~/Non-Soil~~ Fumigation Pest Control Certification examination offered by the Colorado Department of Agriculture.
 - (2) A reciprocal Soil ~~/Non-Soil~~ Fumigation Pest Control license may be issued if the license, issued by a state with an approved Environmental Protection Agency Certification Plan with the equivalent category, is current and in good standing. A reciprocal license will expire on the date of the original issuing state's license.
 - (3) Applicators must obtain at least one (1) Pest Management Continuing Education Credit in Soil ~~/Non-Soil~~ Fumigation Pest Control prior to the expiration of the license to renew the category. Failure to obtain at least one continuing education credit will result in the expiration of the license category and the applicator will be required to retest.
 - (4) The Soil ~~/Non-Soil~~ Fumigation Pest Control category does not allow application of fumigants to control pests in structures as described in category 303, Structural Fumigation Pest Control. To apply a fumigant in a structure, a person holding a category 401, Private Pesticide Applicator license, must also hold category 303, or to control pests in non-soil sites, such as burrowing rodent control, described in category 309B: Non-Soil Fumigation Pest Control.

- (5) To apply a fumigant in a structure or to apply a fumigant to control pests in non-soil sites, including burrowing rodent control, the private applicator must hold, in addition to a category 401, Private Pesticide applicator license, category 303, category 309B, or, if applicable, both.
- (c) Category 309B: Non-Soil Fumigation Pest Control: For the use of a fumigant to control pests in non-soil sites not otherwise addressed in category 303, Structural Fumigation Pest Control.
- (1) The Non-Soil Fumigation Pest Control category may be obtained by successfully passing the Non-Soil Fumigation Pest Control Certification examination offered by the Colorado Department of Agriculture.
- (2) A reciprocal Non-Soil Fumigation Pest Control license may be issued if the license, issued by a state with an approved Environmental Protection Agency Certification Plan with the equivalent category, is current and in good standing. A reciprocal license will expire on the date of the original issuing state's license.
- (3) Applicators must obtain at least one (1) Pest Management Continuing Education Credit in Non-Soil Fumigation Pest Control prior to the expiration of the license to renew the category. Failure to obtain at least one continuing education credit will result in the expiration of the license category and the applicator will be required to retest.
- (4) This Non-Soil Fumigation Pest Control category does not allow application of fumigants to control pests in structures as described in category 303, Structural Fumigation Pest Control, or application of fumigants to control pests in soil as described in category 309A: Soil Fumigation Pest Control.
- (5) To apply a fumigant in a structure or to apply a fumigant to control pests in soil the private applicator must hold, in addition to a category 401, Private Pesticide applicator license, category 303, category 309A, or, if applicable, both.

Subpart E Licensure Actions, Suspension, Denial, Revocation

- 2.62. Any of the following actions shall constitute grounds for the suspension, restriction, refusal to renew, denial, or revocation of a license or certification, whether alone or in conjunction with violations of any provision of the act or of any other provision of these Rules:
- (a) The application of pesticides in a negligent or willful manner which creates, either by pesticide residue or by direct damage, a hazard to property, which shall include without limitation, crops, ornamental plants, and animals (including economically important insects).
 - (b) The application of pesticides in a negligent or willful manner which endangers human health.
 - (c) The creation of a situation from improper handling of pesticides, including spillage, leakage, vapors or disposal, which constitutes a hazard to the health, welfare or safety of any person, the general public, any animal or animals (including economically important insects), any crops, any ornamental plants, or the environment.

Part 8. Agricultural Applicators.

- 8.01. The agricultural classification includes the following categories:

- (a) Category 101: Agricultural Insect Control: the application of pesticides to agricultural plants, including applications performed on pastures, croplands and non-crop agricultural lands, to control invertebrate pests, including insects, mites, slugs, snails, and nematodes.
- (b) Category 102: Agricultural Plant Disease Control: the application of pesticides to agricultural plants, including applications performed on pastures, croplands and non-crop agricultural lands, to control plant diseases.
- (c) Category 103: Agricultural Weed Control: the application of pesticides to agricultural lands, including pastures, croplands and non-crop agricultural lands, to control weeds.
- (d) Category 104: Seed Treatment: the application of pesticides to seeds on agricultural establishments as defined at 40 C.F.R. § 170.3 (as incorporated herein by reference) or seed treatment facilities.
- (e) Category 105: Livestock Pest Control: the application of pesticides to livestock.
- (f) Category 106: Forest Pest Control: the application of pesticides in forests, forest nurseries, forest seed producing areas managed for the production of timber and other forest products or maintained as wood vegetation for such indirect benefits as protection of catchment areas or public recreation, including windbreaks and downed timber. For applications in forested areas within fifty (50) feet of a residential or commercial structure, an applicator must also hold the ornamental pest control category in accordance with Part 9 of these Rules and comply with all of the posting and notification requirements in Section 35-10-112, C.R.S., of the Pesticide Applicators' Act. This additional certification in the ornamental pest control category shall not apply to aerial applicators or ground applications made by federal, state, or local governments on property they own. This category does not apply to pesticide applications made to control vertebrate pests.
- (g) Category 107: Rangeland Pest Control: the application of pesticides to land which is not managed for turf, pasture or forest on which the vegetation is predominantly native plant species or introduced species managed as native species such as grasses, grass-like plants, forbs or shrubs. Rangelands include but are not limited to natural grasslands, shrublands, deserts, tundras, and meadows. For applications performed in rangeland areas within fifty (50) feet of a residential or commercial structure, an applicator must also hold the turf pest control category in accordance with Part 9 of these Rules and comply with all of the posting and notification requirements in Section 35-10-112, C.R.S., of the Pesticide Applicators' Act. This additional certification in the turf pest control category shall not apply to aerial applicators or ground applications made by federal, state, or local governments on property they own. This category does not apply to pesticide applications made to control vertebrate pests.
- (h) Category 108: Aquatic Pest Control: the application of pesticides to standing or running water when made to control weeds, amphibians, fish and other pests in water, except for pesticide applications which are included in the "Public Health" category, at Part 8.01(j).
 - (1) Category 113: Metam sodium for root control in sewers: the application of metam sodium in sewers to control roots. For purposes of this sub-category, "sewer" shall mean any artificial conduit for the transmission of wastewater to a wastewater treatment plant.
- (i) Category 109: Industrial and Right-of-Way Weed Control: the application of pesticides to maintain roads, sidewalks, trails, paths, utility lines, railways, parking lots, drilling rigs, substations, open irrigation and drainage structures or similar areas and adjacent land

within right of ways associated with such areas for the purpose of establishing or maintaining definable cover or bare ground.

- (j) Category 110: Public Health Pest Control: The application of pesticides for the control of pests having medical or public health importance, except vertebrates. This category applies to non-government commercial applicators who use pesticides for the management and control of pests having public health importance.
 - (1) Category 110G: Government-Sponsored Public Health Pest Control: The application of restricted use pesticides in government-sponsored public health programs for the control of pests having medical or public health importance.
- (k) Category 111: Research and Demonstration: the application of pesticides in the course of conducting field research or demonstration. No license or certification will be issued in this category unless the applicant also obtains licensing or certification, in the specific category listed in these Rules, which is appropriate to the research activity.
- (l) Category 114: Aerial Pest Control: The application of pesticides by unmanned aerial vehicle (UAV), fixed or rotary wing aircraft.
 - (1) The Aerial Pest Control category must be held in addition to the ~~Agricultural~~ ~~Pest~~ ~~Management~~ ~~Category~~ for the aerial application being made.
 - (2) The Aerial Pest Control category may be obtained by successfully passing an approved Aerial Pest Control Certification examination offered by the Colorado Department of Agriculture or any state with an approved Environmental Protection Agency Certification Plan. Proof of a passing score obtained within the last 12 months with exam results 70% or better must be provided to the Department with the application.
 - 3) A reciprocal Aerial Pest Control license may be issued if the license, issued by a state with an approved Environmental Protection Agency Certification Plan with the equivalent category, is current and in good standing. A reciprocal license will expire on the date of the original issuing state's license.
 - 4) Applicators must obtain at least one (1) Pest Management Continuing Education Credit in Aerial Pest Control prior to the expiration of the license to renew the category. Failure to obtain at least one continuing education credit will result in the expiration of the licensure category and the applicator will be required to retest.
- (m) Category 309A: Soil ~~/Non-Soil~~ Fumigation Pest Control: For the use of a fumigant to control pests in soil ~~or non-soil sites not otherwise addressed in Category 303, Structural Fumigation Pest Control~~.
 - (1) The Soil ~~/Non-Soil~~ Fumigation Pest Control category must be held in addition to the Agricultural Pest Management Category for the fumigation application being made.
 - (2) The Soil ~~/Non-Soil~~ Fumigation Pest Control category may be obtained by successfully passing the Soil ~~/Non-Soil~~ Fumigation Pest Control Certification examination offered by the Colorado Department of Agriculture.
 - (3) A reciprocal Soil ~~/Non-Soil~~ Fumigation Pest Control license may be issued if the license, issued by a state with an approved Environmental Protection Agency

Certification Plan with the equivalent category, is current and in good standing. A reciprocal license will expire on the date of the original issuing state's license.

- (4) Applicators must obtain at least one (1) Pest Management Continuing Education Credit in Soil ~~/Non-Soil~~ Fumigation Pest Control prior to the expiration of the license to renew the category. Failure to obtain at least one continuing education credit will result in the expiration of the license category and the applicator will be required to retest.

- (5) The Soil Fumigation Pest Control category does not allow application of fumigants to control pests in structures as described in category 303, Structural Fumigation Pest Control, or to control pests in non-soil sites, such as burrowing rodent control, described in category 309B: Non-Soil Fumigation Pest Control. To make such applications, a commercial applicator must hold category 303, category 309B, or, if applicable, both.

8.02. Applicants for licensing as a qualified supervisor in the agricultural pest control categories, except the metam sodium for root control in sewers sub-category, must have the following field experience or equivalents. Such field experience must have been obtained within the five years immediately preceding the date of the applicant's application for licensing.

- (a) Said applicant shall have obtained a minimum of eight months field experience in agricultural pest control.
- (b) If said applicant has earned college or university credit in agricultural pest control or related fields, such credit may be combined with field experience in agricultural pest control in order to qualify for licensing as a qualified supervisor, as follows:
 - (1) Two years college credit and two months field experience in agricultural pest control; or
 - (2) One year college credit and five months field experience.

8.03. Commercial applicators classified in the agricultural categories shall provide the following notices of pesticide applications.

- (a) Prior to each application, the customer shall be informed of: (1) the pesticide(s) to be applied, (2) the site of application, (3) applicable re-entry intervals, (4) applicable grazing intervals, (5) applicable pre-harvest interval, and (6) any precautionary statements contained on the applicable pesticide label(s). This notice may be oral.
- (b) After the application, the applicator shall promptly furnish the customer with a written notice which states: (1) the pesticide(s) applied; (2) the amount of each pesticide applied; (3) the date of application; (4) the site of application; (5) applicable re-entry intervals; (6) applicable grazing intervals; (7) applicable crop rotation intervals; and (8) any precautionary statements contained on the pesticide label(s).
- (c) An applicator may furnish the information specified in Parts 8.03(a)(3) through (6), and/or Parts 8.03(b)(5) through (8) above, by giving the customer a copy of the applicable pesticide label(s).
- (d) In the event that a commercial applicator classified in the agricultural categories performs an application at a site which is occupied by someone other than the applicator's customer, the applicator shall be responsible for giving the notices required by Parts 8.03(a) and (b) above to the person(s) who are occupying the site, as well as to the

customer. This Part 8.03(d) does not apply to applications to crops or to large-scale pest control programs.

- (e) Notices in this Part 8.03 may be provided electronically when the following conditions have been met.
 - (1) Commercial applicators must obtain a written request from each customer and occupant confirming their request to obtain any notice required by these Rules electronically.
 - (2) A commercial applicator must maintain a record of the written request(s) for electronic notices from each customer and occupant.
 - (3) A commercial applicator that does not have a record of the written request(s) for electronic notices on file at the time of an application must provide a notice as outlined in Parts 8.03(a) - (d).
- (f) Commercial, registered limited commercial, or registered public applicators must comply with all applicable signage requirements for aquatic applications in Part 13 below.

8.04 An applicant for licensing in the sub-category of metam sodium for root control in sewers shall satisfy each of the following requirements:

- (a) In addition to any other required examination, an applicant must take and pass the specific examination for this sub-category, but not the examination for the aquatic pest control category.
- (b) An applicant for licensing as a qualified supervisor in this sub-category must have the following field experience or equivalents. Such field experience must have been obtained within the five years immediately preceding the date of the applicant's application for licensing.
 - (1) An applicant shall have obtained a minimum of 40 hours of field experience in the application of pesticides in sewers, including, but not limited to, metam sodium for root control in sewers; or
 - (2) If an applicant has a Level 2 or 3 wastewater collection certification issued by the Colorado Water Distribution and Wastewater Collection Systems Council, or a Class A, B, or C wastewater treatment plant operator certification issued by the Colorado Department of Public Health and Environment pursuant to Title 25, Article 9 of the Colorado Revised Statutes, the applicant shall have obtained a minimum of 20 hours of field experience in the application of pesticides in sewers, including, but not limited to, metam sodium for root control in sewers.
- (c) Each applicator technician working for a commercial applicator, registered limited commercial applicator, or registered public applicator licensed or registered in this sub-category shall have at a minimum 32 hours of training:
 - (1) At least 8 of which shall be classroom-instructional training covering: applicable State, Federal, and local laws and regulations, environmental precautions, use, equipment and calibration, pesticides and their families, pest management, applicator safety, pesticide label and labeling, host and pest identification, and public safety; and

- (2) At least 24 hours of which shall be on the job training. At least 8 hours of this training shall be conducted by a licensed qualified supervisor or a licensed certified operator, which licensed certified operator has at least 20 hours of experience in the application of pesticides in sewers, including, but not limited to, metam sodium for root control in sewers, within the last 2 years. No more than 16 hours of said on the job training may be conducted by an experienced technician trained by the applicator. Said training shall cover: environmental precautions, use, equipment and calibration, pesticides and their families, pest management, applicator safety, pesticide label and labeling, host and pest identification, and public safety.
- (d) Each sales technician working for a commercial applicator licensed in this sub-category shall have at a minimum 32 hours of training:
 - (1) At least 8 hours of which shall be classroom-instructional training covering: applicable State, Federal, and local laws and regulations, environmental precautions, pesticides and their families, pest management, pesticide label and labeling, host and pest identification, and public safety;
 - (2) At least 16 hours of which shall be on the job training. At least 8 hours of this training shall be conducted by a licensed qualified supervisor or a licensed certified operator, which licensed certified operator has at least 20 hours of experience in the application of pesticides in sewers, including, but not limited to, metam sodium for root control in sewers, within the last 2 years. No more than 8 hours of said on the job training may be conducted by an experienced technician trained by the applicator. Said training shall cover: environmental precautions, pesticides and their families, pest management, pesticide label and labeling, host and pest identification, and public safety; and
 - (3) The remaining 8 hours shall be divided between classroom-instructional training and on the job training as the need is determined by the qualified supervisor.
- (e) Each applicator technician or sales technician continuing to work for the same commercial applicator, registered limited commercial applicator, or registered public applicator licensed or registered in this sub-category shall have after the first season of experience, at a minimum, the following on-going training: 4 hours of training conducted by a licensed qualified supervisor or licensed certified operator, which licensed certified operator has at least 20 hours of experience in the application of pesticides in sewers, including, but not limited to, metam sodium for root control in sewers, within the last 2 years. The qualified supervisor shall determine from those topics enumerated above in Parts 8.04(c)(1) and (2) the training required. Said training may be either classroom-instructional or on the job training as determined by the qualified supervisor.
- (f) Each new hire experienced technician working for a commercial applicator, registered limited commercial applicator, or registered public applicator licensed or registered in this sub-category shall have at a minimum 16 hours of training:
 - (1) At least 4 hours of which shall be classroom-instructional training covering: applicable State, Federal, and local laws and regulations, environmental precautions, use, equipment and calibration, pesticides and their families, pest management, applicator safety, pesticide label and labeling, host and pest identification, and public safety;
 - (2) At least 8 hours of which shall be on the job training conducted by a licensed qualified supervisor or a licensed certified operator, which licensed certified operator has at least 20 hours of experience in the application of pesticides in

sewers, including, but not limited to, metam sodium for root control in sewers, within the last 2 years. Said training shall cover: environmental precautions, use, equipment and calibration, pesticides and their families, pest management, applicator safety, pesticide label and labeling, host and pest identification, and public safety;

- (3) The remaining 4 hours shall be divided between classroom-instructional training and on the job training as the need is determined by the qualified supervisor; and
- (4) Experienced sales technicians are not required to complete training in use, equipment and calibration, nor applicator safety.

Part 10. Structural Applicators.

10.01. The structural pest control classification includes the following categories.

- (a) Category 301: Wood Destroying Organism Pest Control: the application of pesticides to control termites, carpenter ants, powder post beetles, fungi, and/or other wood destroying organisms in structures and/or adjacent outside areas.
- (b) Category 302: Outdoor Vertebrate Pest Control: the application of pesticides intended for preventing, destroying, repelling or mitigating any reptile, bird, feral dogs and cats, moles, voles, bats, wild carnivores, rabbits, skunks, amphibian pests not in water and any other vertebrate pest, except rats and mice.
- (c) Category 303: Structural Fumigation: the application of a fumigant to one or more rooms in a structure or to the entire structure at a desired concentration and for a length of time necessary for the control of rodents and/or insect pests, including the application of a fumigant to a localized space or harborage within a structure, including but not limited to railcars, storage containers, grain storage silos or other enclosures, including tarpaulin fumigations, for insect and/or rodent control. This category is required for the use of a fumigant in any licensure category authorized by Title 35, Article 10, when the application of the fumigant is made to or in a structure as defined in Part 1.02(m).
- (d) Category 304: Residential/Commercial Pest Control: the application of pesticides or bait stations intended for use for preventing, destroying, repelling or mitigating structural pests, including without limitation insects and rodents. However, this category does not include the application of fumigants or actions taken to control wood destroying organisms, outdoor vertebrates, or grain storage pests.
- (e) Category 305: Stored Commodities Treatment: the application of pesticides for the treatment of pests in raw grain stored in facilities which are not used for animal or human habitation; the application of plant growth regulators to agricultural commodities stored in facilities which are not used for animal or human habitation; and the application of pesticides to commodity processing equipment or commodity storage facilities (not including offices or other structures). This category does not cover applications made to control pests in potato storage facilities covered by Category 308.
- (f) Category 306: Wood Preservation and Wood Products Treatment: the application of pesticides to prevent, destroy, repel or mitigate pests in wood or wood products which are, or are capable of being, incorporated into a structure, not including downed timber prior to bark removal or sawing.
- (g) Category 307: Interior Plant Pest Control: the application of pesticides to house plants and other indoor ornamental plants kept or located within structures occupied by humans,

including, but not limited to houses, apartments, offices, shopping malls, other places of business and other dwelling places, to control invertebrate pests that adversely affect such plants, including insects, mites, slugs, snails and nematodes; and to control plant diseases.

- (h) Category 308: Post-Harvest Potato Pest Control: the application of pesticides for the treatment of pests in raw potatoes stored in facilities which are not used for animal or human habitation; the application of plant growth regulators to potatoes stored in facilities which are not used for animal or human habitation; and the application of pesticides to potato processing equipment or potato storage facilities (not including offices or other structures).
- (i) Category 309B: ~~Soil~~ Non-Soil Fumigation Pest Control: For the use of a fumigant to control pests in ~~soil or~~ non-soil sites, such as burrowing rodent control, not otherwise addressed in category 303, Structural Fumigation Pest Control.
 - (1) The ~~Soil~~ Non-Soil Fumigation Pest Control category must be held in addition to the Structural Pest Management category for the fumigation application being made.
 - (2) The ~~Soil~~ Non-Soil Fumigation Pest Control category may be obtained by successfully passing the ~~Soil~~ Non-Soil Fumigation Pest Control Certification examination offered by the Colorado Department of Agriculture.
 - (3) A reciprocal ~~Soil~~ Non-Soil Fumigation Pest Control license may be issued if the license, issued by a state with an approved Environmental Protection Agency Certification Plan with the equivalent category, is current and in good standing. A reciprocal license will expire on the date of the original issuing state's license.
 - (4) Applicators must obtain at least one (1) Pest Management Continuing Education Credit in ~~Soil~~ Non-Soil Fumigation Pest Control prior to the expiration of the license to renew the category. Failure to obtain at least one continuing education credit will result in the expiration of the license category and the applicator will be required to retest.
 - (5) The Non-Soil Fumigation Pest Control category does not allow application of fumigants to control pests in structures as described in category 303, Structural Fumigation Pest Control, or application of fumigants to control pests in soil as described in category 309A: Soil Fumigation Pest Control. To make such applications, a commercial applicator must hold category 303, category 309A, or, if applicable, both.

10.02. An applicant for licensing as a qualified supervisor in the structural pest control categories of wood destroying organisms, residential/commercial pest control, and fumigation must have the following field experience or equivalents. Such field experience must have been obtained during the five years immediately preceding the date of the applicant's application for licensing. Experience using pesticides gained while the applicant was maintaining his own home, or performing janitorial or maintenance duties for another in a residential, industrial or commercial location will not satisfy experience requirements imposed by these regulations.

- (a) Said applicant must have obtained at least twenty-four months field experience in structural pest control. In addition, an applicant for licensing as a qualified supervisor in the structural pest control category of wood destroying organisms must have obtained, within the two years immediately preceding the date of the applicant's application for licensing, at least 100 hours of verifiable field experience in termite control. A minimum of

30 of said 100 hours must consist of verifiable "hands-on" field experience covering drill and inject and other post-treat methods and applications. Any or all of the 100 hours may be obtained in courses approved by the Commissioner.

- (b) If said applicant has earned college or university credit in structural pest control or related fields, such credit may be combined with field experience in related categories of structural pest control in order to qualify for licensing as a qualified supervisor, as follows:
 - (1) Four years college credit and four months field experience; or
 - (2) Three years college credit and nine months field experience; or
 - (3) Two years college credit and fourteen months field experience; or
 - (4) One year college credit and nineteen months field experience.
- 10.03. An applicant for licensing as a qualified supervisor in the structural pest control categories of outdoor vertebrates, wood preservation and wood products treatment, stored commodities treatment, post-harvest potato pest control, or interior plant pest control must have the following field experience or equivalents. Such field experience must have been obtained within the five years immediately preceding the date of the applicant's application for licensing:
- (a) Said applicant must have obtained at least eight months field experience in the related categories of structural pest control.
 - (b) If said applicant has earned college or university credit in the related categories of structural pest control, such credit may be combined with field experience in related categories of structural pest control in order to qualify for licensing as a qualified supervisor, as follows:
 - (1) Two years college credit and two months field experience; or
 - (2) One year college credit and five months field experience.
- 10.04. At the time of a pesticide application, a commercial applicator licensed in any structural pest control category shall leave for each customer, a printed or legibly written notice stating the name of each pesticide applied, the date applied, and such precautionary statements from the label of the pesticide or device as are necessary or appropriate to avoid endangering human or animal health, or to avoid creating an unreasonable risk of damage to property.
- 10.05. In the event that the customer is not the occupant, at the time of a pesticide application a commercial applicator licensed in any structural pest control category shall leave for the occupant, a printed or legibly written notice stating the name of each pesticide applied, the date applied, and such precautionary statements from the label of the pesticide or device as are necessary or appropriate to avoid endangering human or animal health, or to avoid creating an unreasonable risk of damage to property.
- 10.06. Notices in Parts 10.04 and 10.05 may be provided electronically when the following conditions have been met.
- (a) Commercial applicators must obtain a written request from the customer or the occupant, as required, confirming their request to obtain any notice required by this Rule electronically.

- (b) A commercial applicator must maintain a record of the written request(s) for electronic notices from each customer or occupant.
 - (c) A commercial applicator that does not have a record of the written request(s) for electronic notices on file at the time of an application must provide a written notice as outlined in Parts 10.04 and 10.05.
- 10.07 When making pesticide applications within a multiunit dwelling site and the owner of the site or agent of the owner of the site is not present at the site, a commercial applicator must post a written notice at the primary entrance(s) to interior common area(s) that has been treated. The notice shall state the name of each pesticide applied, the date applied, and such precautionary statements from the label of the pesticide or device as are necessary or appropriate to avoid endangering human or animal health, or to avoid creating an unreasonable risk of damage to property. Electronic notices may not be used to meet this requirement.
- 10.08. Bed Bug Reporting Requirements in accordance with C.R.S. 38-12-1003 and 1004:
- (a) A commercial applicator, qualified supervisor, or certified operator inspecting a tenant's dwelling unit or any dwelling unit contiguous to a tenant's dwelling unit in single-family or multi-unit dwellings, in accordance with C.R.S. 38-12-1003, must provide a report of all bed bug activity that the commercial applicator, qualified supervisor, or certified operator identifies within the dwelling or any contiguous dwelling unit at the time of inspection, to the landlord within twenty-four hours of the inspection. Including:
 - (1) Units affected by bed bug activity; and
 - (2) Remediation recommendations.
 - (b) A commercial applicator, qualified supervisor, or certified operator inspecting a tenant's dwelling unit or any dwelling unit contiguous to a tenant's dwelling unit in single-family or multi-unit dwellings, in accordance with C.R.S. 38-12-1004, shall advise the tenant that any furniture, clothing, equipment, or personal property identified as having bed bug activity should not be removed from the dwelling unit until a pest control agent retained by the landlord determines that any bed bug treatment determined to be necessary has been completed.
 - (c) A commercial applicator, qualified supervisor, or certified operator providing any report in accordance with C.R.S. 38-12-1003 shall retain a copy of any such report required in Part 10.08(a) for three years.

Part 18. Statements of Basis, Specific Statutory Authority & Purpose

Statements of Basis, Specific Statutory Authority and Purpose for rulemaking activity from 1968 through 1991 are no longer in the Departments files and are presumably in the state archives.

18.01. January 17, 1992 - Effective March 1, 1992

These rules are adopted by the Commissioner of the Department of Agriculture pursuant to his authority under § 35-10-118, C.R.S. (1991 Supp.).

The purpose of these rules is to: revise the licensing procedures for commercial applicators pursuant to § 35-10-118 (2) (b), (c), and (d); revise the licensing procedures for qualified supervisors pursuant to § 35-10-118 (2)(b) and (c); adopt registration procedures for limited commercial and public applicators pursuant to § 35-10-118 (2) (b) and (c); adopt licensing procedures for certified operators pursuant to § 35-10-118 (2)(b), (2) (c) and (4) ; and adopt technician training requirements pursuant to § 35-10-118 (2),

§ 35-10-106 (l)(c), and § 35-10-110 (3) of the Pesticide Applicators' Act, Title 35 Article 10, C.R.S. (1991 Supp.).

Most issues encountered when developing these rules were neither exclusively factual nor exclusively policy. Consequently most issues were considered as both factual and policy.

Factual issues encountered when developing these rules include:

1. Commercial applicators are subcontracting with commercial applicators to perform pesticide applications. This activity can be divided into, two categories. First, there are subcontracts involving applications in the categories for which both commercial applicators are licensed. An example of this would be a commercial applicator licensed in agricultural weed control, but who has ground application equipment only, subcontracting with a qualified licensee applications for agricultural weed control that require application by air. Second, there are subcontracts involving applications for which the contracting commercial applicator is not licensed, but the subcontracting commercial applicator is. An example of this would be a commercial applicator licensed only in turf weed control subcontracting with a commercial applicator licensed in industrial and right of way applications for weed control in that category. Enforcement questions have arisen as to whom is responsible for such applications, i.e., the contracting applicator, the subcontracting applicator, or both.
2. A certificate of good standing from the Secretary of State will establish that an applicant for license is a bonafide business prior to issuance of such license.
3. In trying to define the level at which registration of public applicators should occur, the myriad of political subdivisions that may not need to register, nor choose to do so, while a sister subdivision may be required to do so by their use of restricted use pesticides was considered. It was decided to let each political entity determine what subdivision best described them as public applicators.
4. Expiration dates issued from the date of licensing have little meaning to the license holder. The birth date of the qualified supervisor and certified operator was chosen for the expiration date of their licenses, except for licenses issued pursuant to § 35-10-118(4).
5. The revised statute requires restricted use pesticides to be applied by a licensed qualified supervisor, licensed certified operator, or under the on site supervision of a licensed qualified supervisor. In the agricultural categories the pesticides being applied are often classified as restricted use. It is not uncommon for commercial applicators to employ individuals for short periods of time during the growing season to apply pesticides. The application equipment utilized often holds only one person. Therefore the individual applying restricted use pesticides from equipment holding only one person must be licensed as a qualified supervisor or certified operator. Many individuals working on this basis are licensed to use or supervise the use of restricted use pesticides in other states. Such licenses were issued pursuant to examination and/or continuing education. Because of the circumstances necessitating speedy issuance of credentials and the prior existence of similar credentials from other jurisdictions, it was the opinion of the advisory committee and the department that a certified operator's license could be reciprocal. In addition, in order to allow for emergency circumstances and still have assurance of competency, the provision for administration of an examination by the qualified supervisor so a person could apply restricted use pesticides for ten days was included.
6. When considering the requirements for continuing education the topics needed to be relevant and the opportunity to spread out the training was considered, as well as what areas were necessary to be updated every three years and how much credit was needed in each of these areas.

7. The factual issues considered when writing rules for technician training included who is a technician, the topics each type of technician should have knowledge about and be familiar with, the hours of training needed to adequately cover said topics, what is used and how the business operates, how the classroom vs. on the job training should be divided and who is responsible for the training and who can train.

Policy issues encountered when developing these rules include:

1. Consideration of whom to hold responsible when a licensed commercial applicator is subcontracting with another licensed commercial applicator.
2. Not defining political subdivisions allows flexibility in the administration of registering public applicators.
3. In considering the continuing education requirements it was decided to allow credits vs. hours and not to assign time increments to the credits. This was done because an update in one area where there has been little change may be adequately covered in a minimum amount of time, whereas an update on another topic may require several hours to be considered adequate.
4. In relation to technician training the goal was to provide competent technicians using pesticides to assure proper application and minimization of hazards while not being overly burdensome or eliminating competition through regulation. The manner in which each business operates was also considered, i.e. the differences between an agricultural, turf, ornamental and structural business.

18.02. January 31, 1992 - Effective February 1, 1992

This rule is adopted under the Pesticide Applicators' Act pursuant to § 35-10-118 and pertains to the administration enforcement of the licensing provisions authorized under Pesticide Applicators' Act.

During the 1990 legislative session, article 10 of title 35 was repealed and reenacted. Sections 35-10-105 - 107, 35-10-109- 110, and 35-10-113-116 revised the types licenses issued to pesticide applicators by the department of agriculture and manner in which they are issued. The revisions included registration by limited commercial and public applicators under certain circumstances, licensing of certified operators, and training requirements for technicians.

These rules allow the Commissioner to comply with those provisions.

The notice and hearing requirements of § 24-4-103 of the Colorado Administrative Procedures Act have been met. In accordance with the timelines established for rule making the effective date for these rules will fall after the beginning of spray season. Therefore, the immediate adoption of Part 1. - 5. is imperatively necessary for the preservation of public health, safety, and welfare.

18.03. September 17, 1993 - Effective October 30, 1993

These rules are adopted by the Commissioner of the Department of Agriculture pursuant to his authority under § 35-10-118, C.R.S. (1992 Supp).

The purpose of these rules is to: (1) set the annual licensing fee for commercial applicators pursuant to 35-10-118 (2)(d); to permit the use of a termiticide only in accordance with label directions; and to houseclean the existing rules by correcting incorrect citations, eliminate conflicting provisions, correcting misspellings, etc.

Factual issues encountered when developing the rule setting the annual license fee for commercial applicators include:

1. In 1983 the legislature repealed and reenacted the Pesticide Applicators' Act. The 1983 statute established the Pesticide Applicators' fund for the purposes of administration and enforcement of the program. It also set the licensing fee for a commercial applicator's license at \$250.00.
2. In 1990 the legislature repealed and reenacted the Pesticide Applicators' Act. The current statute authorizes the Commissioner to set the amount of the license fee for a commercial applicator, business license, not to exceed \$250.00 through licensing year 1991 and \$350.00 thereafter.
3. The licensing fee for a commercial applicator's business license has not been raised since 1983.
4. Program costs now exceed revenues and the fund balance has been depleted.

Policy issues encountered when developing the rule setting the annual license fee for commercial applicators include:

1. The fee structure for the commercial pesticide applicator program has been carefully considered by the Department and the Pesticide Advisory Committee. After reviewing the projected shortfall and various fee increases it was decided that the most prudent course at this time was to increase the annual commercial applicator business license fee \$100 in order to help reduce the shortfall and continue the program services.
2. The remainder of the projected shortfall will be addressed by program cost reductions.
3. In addition the Department and the Advisory Committee will continue to study the program's fee structure for further refinement and recommendations.

Factual issues encountered when developing the rule pertaining to the use of termiticides include:

1. Under Section 2 (ee) of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) a pesticide application may be made at less than labeled rate as long as the label does not prohibit such an application and it is made in accordance with other label directions.
2. Many applications made for the control of termites are made at less than the labeled rate. This is especially true for pretreat applications.
3. To date there is no scientific data to support the efficacy of using a termiticide at less than the labeled rate.
4. Consumers, especially pretreat customers, may be purchasing termite control, assuming a protection has been afforded them when in actuality very little termiticide has been applied.
5. Efficacy studies at less than the current labeled rate are being performed.
6. If the studies show efficacy at less than labeled rates, then this rule will be reconsidered.

Policy issues encountered when developing the rule pertaining to the use of termiticide include:

1. The issue of applications at less than the rates stated on any label was considered. It was decided to limit the rule to termiticide applications only.
2. The issue is one of consumer protection and the potential for fraudulent applications if the 2 (ee) policy is continued as it relates to termiticides.
3. The Federal Insecticide, Fungicide and Rodenticide Act clearly authorizes a state to be more restrictive than the Act, but not less. This rule is more restrictive and falls well within statutory authority.

Factual issues encountered when developing the housekeeping measures included incorrect citations, misspellings, conflicting provisions and unclear provisions exist in the current rules.

Policy issues encountered when developing the housekeeping measures included the necessity of maintaining correct rules.

18.04. July 28, 1994 - Effective September 30, 1994

These rules are adopted by the Commissioner of the Department of Agriculture pursuant to his authority under § 35-10-118, C.R.S. (1993 Supp.)

The purpose of the rules is to: create a mixer/loader category pursuant to 35-10-118 (2) (b); clarify the qualifications for licensing in the wood destroying organisms category pursuant to 35-10-118 (2) (b); clarify the definition of technician to include flaggers for purposes of technician training; and correct the terminology in the requirements for licensing as a qualified supervisor/certified operator.

Most issues encountered when developing these rules were neither exclusively factual nor exclusively policy. Consequently most issues were considered as both factual and policy.

Factual issues' encountered when developing these rules include:

1. It is not unusual for commercial applicators licensed in the agricultural categories, especially aerial applicators, to employ individuals who only mix and load the pesticides being used. These employees do not evaluate pest problems, make recommendations, sell services, etc. Many of the pesticides used by applicators licensed in the agricultural pest control categories are restricted use pesticides. This means the employee can only handle these pesticides if they are licensed as a certified operator or qualified supervisor, or if a licensed qualified supervisor is on site. In order to obtain a license an individual must successfully complete a general examination and category specific examinations. The category specific examinations include questions on pests, hosts, pest control and various subjects related to evaluating pest problems, making recommendations, selling services, etc. Since mixer/loaders do not perform these functions, and will not perform them, the category specific examinations are difficult for them to successfully complete and irrelevant to their job. The subjects on the general examination cover the topics in which an individual acting strictly as a mixer/loader would need to be knowledgeable.
2. To control termites a structure may be treated prior to completion or a finished structure may be treated. The skills and knowledge needed to perform these two different types of applications are vastly different. The language setting out the experience for licensing in the wood destroying organism control category was nebulous. An individual with only pre-treat experience and knowledge could be licensed to perform any wood destroying organism control application whether or not he had any post-treat experience. Only a few commercial applicators perform termite applications because of the cost of the equipment and specialization of the service.

3. The code of federal regulations associated with the Federal, Insecticide, Fungicide and Rodenticide Act (FIFRA) has been amended to include expanded worker protection regulations. These regulations cover all handlers including flaggers.

Policy issues encountered when developing these rules include:

1. In relation to establishing a new mixer loader category we had to consider how to comply with both the letter and the intent of the statute without being unduly burdensome on the industry.
2. In relation to defining more specifically the experience needed for licensing in the wood destroying organism category the potential for restraint of trade had to be considered.

18.05. January 19, 1995 - Effective March 2, 1995

This rule is adopted by the Commissioner of the Department of Agriculture pursuant to his authority under § 35-10-118, C.R.S. (1994 Supp.)

The purpose of the rule is to correct a typographical error in the existing rule. Factual issues encountered when developing these rules include:

A typographical error was discovered in the Part 9.02 (b) of the rules. This rule as published states "Such field experience shall have been obtained within the five years immediately preceding the applicant's application for licensing as a qualified supervisor.

Policy issues encountered when developing these rules include:

To be consistent with Part 9.02 and with the original intent of the rule the error needed to be corrected.

18.06. July 23, 1996 - Effective August 30, 1996

STATUTORY AUTHORITY: These emergency rules are adopted by the Commissioner of the Colorado Department of Agriculture (the "Commissioner") under the authority of §35-10-118 (2) and (9) C.R.S. (1995), and in accordance with §24-4-103 (6) C.R.S. (1988, 1995 Supp.).

STATEMENT OF REASON: The reasons for adopting these emergency rules is to: (1) create a sub-category for the use of the pesticide metam-sodium to control roots in sewers pursuant to §3510-118 (2)(b), and set out the standards and criteria associated with the establishment of such a sub-category; (2) repeal Part 8.04 and amend related language in the existing rules concerning mixer/loaders in order to be consistent with amendments to the Pesticide Applicators' Act derived from Colorado Senate Bill 96-086, which became law effective July 1, 1996; and (3) make miscellaneous technical amendments to conform the existing rules to the amendments hereby adopted.

On June 23, 1996, the Commissioner ordered that proceedings be instituted for the adoption of new permanent rules and regulations pertaining to these matters, and notice was published on July 10, 1996, in accordance with applicable law, for a hearing on such proposed new permanent rules and regulations to be held on July 30, 1996, at 9:00 a. m., at the Department of Agriculture, Division of Plant Industry Testing Room, 700 Kipling Street, Suite 4000, Lakewood, Colorado 80215-5894.

NEED FOR EMERGENCY RULES: These emergency rules pertaining to the creation of a sub-category for the use of metam-sodium to control roots in sewers, the standards and criteria associated with the establishment of such a sub-category, and the technical amendments in furtherance thereof, are made necessary by action of the U.S. Environmental Protection Agency ("EPA"). The EPA recently classified the pesticide metam-sodium as a restricted use pesticide when used to control roots in sewers. Applicators wishing to purchase or use this pesticide must now be certified to do so. It is imperative that

these emergency rules be adopted in order to permit the Colorado Department of Agriculture, Division of Plant Industry to license and regulate the activities of pesticide applicators who wish to use metam-sodium for root control in sewers pending the conclusion of the formal rule-making proceedings initiated by the Commissioner for the adoption of permanent rules and regulation on this subject.

The emergency rules pertaining to the repeal of Part 8.04 and the amendment of related language in the existing rules concerning mixer/loaders, and the technical amendments in furtherance thereof, are necessary to conform the existing rules and regulations with amendments to the Pesticide Applicators' Act derived from Colorado Senate Bill 96-086, which became law effective July 1, 1996, pending the conclusion of the formal rule-making proceeding initiated by the Commissioner for the adoption of permanent rules and regulations on this subject.

Based on the foregoing, the Commissioner hereby finds that immediate adoption of these rules is imperatively necessary to comply with state law and federal regulations, and for the preservation of public health, safety and welfare and that compliance with the formal rule- making requirements of §24-4-103 would be contrary to the public interest.

EFFECTIVE DATE: These emergency rules will be effective on the date adopted by the Commissioner, and shall remain in effect for ninety (90) days thereafter.

18.07. September 25, 1996 - Effective November 30, 1996

Statutory Authority: These permanent rules are adopted by the Commissioner of the Colorado Department of Agriculture pursuant to his authority under C.R.S. § 35-10-118(2), (4) and (9) (1995, as amended).

Purpose: The purpose of these permanent rules is to: (1) create a sub-category for the use of the pesticide metam sodium to control roots in sewers pursuant to C.R.S. § 35-10-118(2)(b), and set out the standards and criteria associated with the establishment of such a sub- category; (2) repeal Part 8.04 and amend related language in the existing rules concerning mixer/loaders in order to be consistent with amendments to the Pesticide Applicators' Act derived from Colorado Senate Bill 96-086, which became law effective July 1, 1996; (3) revise the recordkeeping requirements Part 6.03(e);(4) clarify the language in Part 2.49 concerning the issuance of reciprocal licenses; and (5) make miscellaneous technical amendments to conform the existing rules to the amendments hereby adopted and to correct grammatical errors.

Basis: Some of the issues encountered in the promulgation of these permanent rules were neither exclusively factual nor exclusively of a policy nature. Consequently, some issues were considered as both factual and of a policy nature.

The factual and policy issues encountered in adopting these permanent rules include:

1. **Factful Issue(s):** The U.S. Environmental Protection Agency (EPA) recently classified the pesticide metam sodium as a restricted-use pesticide when used to control roots in sewers. Applicators wishing to purchase or use this pesticide must now be certified to do so.

Policy Issue(s): This classification by the EPA has made it necessary to create a new sub- category of aquatic applicators for the application of metam sodium for root control in sewers. In establishing this sub-category, consideration had to be given to complying with both the letter and the intent of the Pesticide Applicators' Act (the Act) without being unduly burdensome on the industry or the agency.
2. **Factual Issue(s):** Colorado SB 96-086 amended C.R.S. 3510-103(15)(a) (II) of the Act to amend the definition of "technician" to include individuals who exclusively mix and/or load

pesticides. This makes the mixer/loader sub-category in the agricultural classification unnecessary.

3. Factual Issue(s): Part 6.03 of the existing rules requires licensed entities to identify the pesticide product they are using. Recording the EPA registration number of the pesticide product is a permitted method under the existing rule, but not required.

Policy Issue(s): Generally, the EPA registration number can more accurately identify a product than the manner in which a licensee may choose to describe the product name, and under the adopted rule, is a required method of identifying the pesticide.

4. Factual Issue(s): Part 2.49 describes the procedure by which an individual certified or licensed by another jurisdiction can obtain a Colorado license as a certified operator issued through reciprocity. The existing language in this part does not make it clear that the issuance of such a license can only be done through re-application, since the Colorado Department of Agriculture is not the original issuing agency. The adopted rule clarifies this point.

18.08. March 13, 1997 - Effective April 30, 1997

Statutory Authority:

These permanent rules are proposed for adoption by the Commissioner of the Colorado Department of Agriculture pursuant to his authority under the Pesticide Applicators' Act (the "Act") at C.R.S. §§ 35-10-118(2), (5) and (9) (1995, 1996 Supp.).

Purpose:

The purpose of these proposed permanent rules is to: amend the definition of the term "abut"; conform the rules and regulations to the amended statutory definition of the term "limited commercial applicator"; repeal Section 2.42; to clarify the language in Section 2.45 regarding when a qualified supervisor may be licensed as a certified operator in an additional category without payment of the application fee for the certified operator's license; consolidate the turf categories into a single category under the ornamental classification, and modify the continuing education requirements therefor; consolidate the ornamental categories into a single category under the ornamental classification, and modify the continuing education requirements therefor; expand, under certain circumstances, the customer notification requirements for pesticide applications at a commercial site; create a new category named "Interior Plant Pest Control" within the structural pest control classification, and establish standards therefor; establish requirements for the identification of service containers; amend the requirements for registration of pesticide sensitive persons pertaining to the statement of proof of medical justification, the frequency for submitting such statement, and payment of the administrative fee for registration; create a Part 15 for rules and regulations pertaining to enforcement, and establish a definition for the phrase "substantial danger or harm to public health and safety, to property, or to the environment" as required by Senate Bill 96-086, which amended C.R.S. § 35-10-121 by adding subsection (2.5); and make miscellaneous technical amendments to conform the existing rules to the amendments hereby proposed.

Factual and Policy Issues

The factual and policy issues encountered in the proposal of these permanent rules are as follows:

- (1). Senate Bill 96-086 amended C.R.S. § 35-10-112(l)(c), which deals with requirements for notifying persons who reside on property abutting the site of a pesticide application. The

amendment provides that two property sites that would be considered abutting but for the fact that they are separated by an alley are for the purposes of this section to be deemed abutting. This statutory change requires amendment of the term “abut” in Section 1.02(a) of the rules in order to make it consistent with this statutory amendment.

- (2). Senate Bill 96-086 amended C.R.S. § 35-10-112 (l)(a), which pertains to the registry of pesticide-sensitive persons. This amendment requires that the proof of medical justification for inclusion on the registry be made by a physician licensed in the state of Colorado, that it be updated every two (2) years, and that the administrative fee for registration be repealed. These statutory changes require conforming amendments to the following sections of the rules: Sections 1.02(e), 12.01, 12.04, and 12.05.
- (3). Senate Bill 96-086 amended C.R.S. § 35-10-103(8), which defines the term “limited commercial applicator.” This amendment expands the definition of the term to include persons engaged in applying pesticides in the course of conducting a business on property leased, as well as property owned by the person or the person's employer. This statutory change requires a conforming amendment in Section 2.18 of the rules.
- (4). Section 2.42 of the rules is repealed because it was needed only for a limited time in order to facilitate the administrative transition from the previous licensing system to the current one.
- (5). Section 2.45 of the rules is amended only to clarify its provisions. No substantive change to this rule is intended.
- (6). The ornamental classification now in effect has the following categories: Turf Insect Control, Turf Plant Disease Control, Turf Weed Control, Ornamental Insect Control and Ornamental Plant Disease Control. The three turf pest control categories all pertain to working on one type of site, namely turf, except for weed control in ornamental beds. The two ornamental categories cover a wide range of sites, but labels for pesticide products used on these types of sites often state the site as “ornamentals” and do not distinguish between various hosts such as locust, elm, etc. A qualified supervisor or certified operator working in any of the current turf categories needs to be aware of symptoms indicative of environmental, cultural practice and pest stresses in the related turf categories in order to properly diagnose a problem and recommend the correct solution. This also applies to a qualified supervisor or certified operator working in any of the current ornamental categories.

The proposed amendments to Section 9.01 of the rules consolidates the three turf categories into a single category, and consolidates the two ornamental categories into a single category. This consolidation will require persons who wish to be licensed in either of these categories to possess a broader range of knowledge covering what was previously divided into separate categories. Thus, one examination for each of the two consolidated categories (i.e., turf and ornamental) will be given rather than the multiple examinations currently given for each of the five separate categories described above.

Also, because of the broader range of knowledge required for each of these consolidated categories, the continuing education requirements for these consolidated categories will be increased from one to two credits. This change is reflected in the amendments to Section 4.01, which will be phased in beginning January 1, 1998.

These proposed amendments to Section 9.01 require the technical conforming amendments that are proposed for Sections 9.02 and 9.03, and 5.7 through 5.21, inclusive.

- (7). Senate Bill 90-086 amended C.R.S. § 35-10-112(2) (d) by adding sign posting notification requirements where a commercial or limited commercial applicator makes a pesticide application to a commercial site when the owner or agent of the owner is not present at the site. The proposed amendments to Section 9.04 of the rules are intended to broaden the notification requirements of that rule (which are unrelated to the statutory sign posting requirements) to specifically address the situation where a pesticide application is made to a commercial site when the owner or agent of the owner is not present.
- (8). The number of interior plants in public structures has gradually increased over the last twenty years. Over time, more and more caretakers of these interior plants have come under the regulation of the Colorado Department of Agriculture with respect to the application of pesticides. These interior plant caretakers have had to qualify for licensing in categories that are not entirely applicable to the circumstances in which they work (e.g., Ornamental Insect Control and Ornamental Plant Disease Control, which cover exterior plants). The addition of an Interior Plant Pest Control category will correct this situation. It will also provide the Colorado Department of Agriculture and the public with a greater assurance that the qualified supervisors, certified operators and technicians working in this category are qualified to do so.

Consideration was given to the placement of this category in either the ornamental classification or the structural pest control classification. Since pesticide applications to indoor plants are made inside buildings and other structures, this new category was placed in the structural pest control classification because the hazards related to such applications and the precautions that need to be taken when making them are more closely related to that classification than the ornamental classification.

The addition of this new category is reflected in the proposed Section 10.01(8) of the rules. The amendments to Sections 10.03 and Sections 5.25 through 5.28, inclusive, are technical amendments made to conform those rules to the addition of this new category.

- (9). Under certain circumstances licensees under the Act transfer pesticides into smaller containers in order to perform or facilitate its application. For example, a structural pest control operator may purchase a 10 gallon pail of rodent bait and provide each of his technicians with a one gallon container of the bait taken from the 10 gallon container. Additionally, certain application equipment is of a size that can be carried and handled by one individual, e.g., a one gallon sprayer used to spot treat weeds in turf. The industry refers to these containers as "service containers." At one point in time the EPA had an operating policy which detailed the requirements for marking service containers so the material in it could be identified. EPA's operating policy was rescinded and is no longer in force.

A new rule requiring the identification of service containers is necessary and appropriate for the public's health, safety and welfare now that the EPA's operating policy has been rescinded. In establishing the requirements for marking service containers, consideration had to be given about providing information essential for safety and welfare without being unduly burdensome on the industry, and without conflicting with existing federal regulations. This new rule appears in the proposed Section 11.08.

- (10). Senate Bill 96-086 amended C.R.S. § 35-10-121 by adding subsection (2.5), which relates to enforcement proceedings brought under the Act. This subsection (2.5) requires the Colorado Commissioner of Agriculture to define the phrase "substantial danger or harm to public health and safety, to property, or to the environment." In response to this statutory amendment, the rules are amended to add a Part 15. Enforcement, and to define the foregoing phrase in proposed Section 15.01.

18.09. February 11, 2004 - Effective May 3, 2004

Statutory Authority

The amendments to these rules are proposed for adoption by the Commissioner of the Colorado Department of Agriculture pursuant to his authority under the Pesticide Applicators' Act, (the "Act"). §§ 35-10-118(2)(a)(b)(c), (5), and (9), C.R.S.

Purpose

The purpose of these proposed rule amendments is to: In Part 1, add the definition of "in the possession of to clarify the proposed rule 7.06, that requires the applicator to have label information at the site of any pesticide application; in Part 2, amend Rule 2.10 by requiring all categories to have on file at the time of submission of an application for renewal of a license, evidence of liability insurance which is in force at the time of the application; amend Rules 2.15 and 2.16 by adding a requirement for a written provision in contracts that incidentally require a pesticide application, that notes that a licensed subcontractor will be used for any pesticide application the primary contractor is not licensed for; in Part 4, delete Rule 4.1 that expired on January 1, 1998 and remove language from the version of Rule 4.1 (h) noting the effective date of the current Rule; delete the version of Rule 4.5 that expired on January 1, 1993 and remove language from Rule 4.5 noting the effective date of the current Rule; in Part 5, amend Rule 5.1 by clarifying that the definitions outlined in 5.1 apply to all technician training outlined in Part 5 of the Rule; amend Rule 5.1(b) by adding the definition of a "new hire experienced technician" and "on-going experienced applicator technician" to clarify training differences outlined in Part 5; amend Rules 5.5, 5.10, 5.15, 5.20, 5.23, and 5.27 to clarify that training requirements outlined in each section pertain to on-going experienced applicator technicians and that on-going training must be conducted each year after the first season of experience; amend Rules 5.6, 5.11, 5.16, 5.21, 5.24, and 5.28 to clarify that the training requirements outlined in each section pertain to new hire experienced technicians; amend Rules 5.9(c) and 5.18(c) to clarify the amount of on the job training hours that must be conducted by a licensed qualified supervisor or certified operator; in Part 6, amend Rule 6.02 to require limited commercial and public applicators to maintain records of all pesticide applications they make; amend Rule 6.03 by adding a requirement that the record of application must have the name of the person(s) who made the application; amend Part 6 by adding a new Rule 6.04 requiring any applicator performing wood destroying insect control for termites to keep and maintain records in addition to those outlined and proposed in Rule 6.03; in Part 7, amend Rule 7.02 by adding requirements for commercial and public applicators to identify their ATV/off-road application equipment; amend Rule 7.02 by adding requirements for public applicators to identify their application equipment; amend Part 7 by adding a new Rule 7.06 to require that a copy of the label for the pesticide in use be in the possession of the applicator at the site of application; in Part 8, amend Rules 8.01 (f) and (g) to clarify that additional licensure in the turf and ornamental categories is required when performing applications in forest or rangeland areas that come within 50 feet of residential or commercial structures; amend Rule 8.01(j) by deleting the language "in programs" and "large scale" to clarify that the Public Health category applies to any pesticide application performed for disease vector control; in Part 11, amend Rule 11.08 to require the name of the applicator in addition to the existing service container labeling requirements; in Part 13, amend Rule 13.04 to clarify that notification signs must be posted within multi-unit residential and commercial properties in a conspicuous manner to prevent children or adults from entering a treated area; and make miscellaneous technical amendments to conform the existing rules to the amendments hereby proposed.

Factual and Policy Issues

The factual and policy issues encountered when developing these rules include:

- 1) Amendments and additions being made in Parts 1,2,4, 5, 6 and 8 are necessary to correct and clarify existing language, delete out dated and irrelevant language, and correct and clarify ambiguous language to reflect the regulatory intent of the existing licensure, business, record keeping, and training requirements.

- 2) A new Rule is proposed in Part 6 to require the signature of the applicator on the service record to help the CDA identify the technician, certified operator, or qualified supervisor responsible for each application during investigations.
- 3) In the last 10 years the termite activity in Colorado has increased. A high level of knowledge and experience in building construction, treatment techniques, and termite biology is needed when performing these applications. Since these applications are made in areas where the consumer can not verify the quality of the application and consumers generally do not possess the knowledge to know the correct steps and procedures to eradicate or control a termite infestation, it is easy for commercial applicators to defraud the consumer. The proposed Rule 6.04 will require applicators to record information specific to termite applications that will allow the CDA to confirm that all treatments were performed to label requirements and industry standards.
- 4) In recent years the Pesticide Application industry has begun using All Terrain Vehicles (ATV's) to perform applications in areas that are inaccessible to standard application vehicles. Under the current Rule 7.02, these ATV's meet the specifications that require the vehicle to be identified, but due to their size applicators have been unable to comply. The proposed Rule addresses this issue and modifies the equipment identification requirements so applicators can identify their equipment, which will ensure the public and the CDA can identify these applicators.
- 5) Currently under Rule 7.02, public applicators are not required to identify their application equipment. Each year the CDA receives a number of inquiries and complaint calls pertaining to public entities that are performing pesticide applications that the CDA office staff must research to determine jurisdictional authority. A new Rule is proposed to require public applicators to identify their application equipment to enable the public and CDA to easily identify the public entity in the field, which will reduce public concern and minimize the CDA staff time required to identify currently registered public applicators.
- 6) Pine Beetle eradication has become a priority for the State of Colorado. As the Pine Beetle infestation has spread, more applications are being performed on private property where the trees are no longer being maintained as part of a forest, but rather as ornamental trees for aesthetics. Applications performed around residential and commercial structures create a higher likelihood that persons or pets may come in contact with the treated area. Ornamental applicators are trained in the precautions needed when making applications around structures, and under 35-10-112 of the PAA are required to post notification at the time of an application. The current Forest category does not address the hazard identification and safety precautions needed when performing pesticide applications in close proximity to inhabited structures. An amendment to Rule 8.01 (f), Forest Pest Control, is proposed to require applicators to hold the appropriate ornamental license, which addresses the safety, hazard, and notification requirements needed when performing applications close to an inhabited structure. The Rangeland Pest Control category, 8.01(g), has the same safety concerns when pesticide applications are made around inhabited structures for insect or noxious weed control. The Rangeland category requirements will be identical to the Forest category except that licensure in the Turf category will be required.
- 7) Rule 11.08 currently requires that any service container be labeled to identify the contents within. Since these service containers are in many cases left at the customer's residence (i.e.: rodent bait stations) or can be inadvertently left behind or left unattended by an applicator, the CDA is proposing an amendment to Rule 11.08 that will require the name of the licensee on the label. In case of an emergency this will provide the name of the licensee so pertinent information for the unattended product (i.e.: labels and Material Safety Data Sheets) can be obtained and the responsible licensee can be quickly contacted to take appropriate remedial action.

- 8) Currently turf and ornamental applicators are only required to post a notification flag at each entryway to a property regardless of its size or the number of buildings on it. Each year the CDA receives calls from pesticide sensitive individuals or concerned parents complaining of turf or ornamental applications that have been performed at their apartment complex and their child or pet, unbeknownst to them at the time, entered a treated area. The current rule in Part 13 does not specify that a flag(s) must be posted within the common areas of multi-unit residential or commercial properties. The proposed amendment to Rule 13.04 will help ensure that any person entering a common area that has been treated with pesticides will be able to see a flag notifying them of that application.

18.10. October 19, 2006 - Effective January 1, 2007

Statutory Authority

These amendments to these rules are proposed for adoption by the Commissioner of the Colorado Department of Agriculture pursuant to his authority under the Pesticide Applicators' Act, (the "Act"). §§ 35-10-118(2)(a)(b)(c), (5), and (9), C.R.S.

Purpose

The purpose of these proposed rules is to make conforming amendments is to address statutory changes made to the Pesticide Applicators' Act as a result of House Bill 1239, The Pesticide Applicators' Act Sunset Review Pesticide Applicators' Bill, and House Bill 1274, The Pesticide Applicators' Act Pesticide Private Applicators License Bill. The purpose of the proposed Rules is to:

- Make miscellaneous technical amendments to conform the existing rules to the amendments proposed;
- Add language to reinstate an pesticide applicator license within 180 days;
- Outline the private applicator examination and licensure requirements and provisions;
- Address examination security provisions for commercial and private applicators;
- Create continuing education requirements as it pertains to private applicators;
- Specify recordkeeping requirements for commercial, registered limited commercial, registered public applicators and licensed private applicators;
- Clarify the pesticide storage requirements of commercial applicators, registered limited commercial applicators, limited public applicators, and private applicators;
- Specify pesticide sensitive notification requirements and provisions that apply to turf and ornamental applicators vs. structural applicators;

Factual and Policy Issues

The factual and policy issues encountered when developing these rules include:

- 1) House Bill 1274 amended C.R.S. § 35-10-104 to expand the authority of the Colorado Department of Agriculture to regulate the use of pesticides by all persons in the State of Colorado. As a result of H.B. 1274, amendments and additions made in Parts 2, 3, 4, 5, 6, 7, 8, 11, 12, and 13 and associated Rules are necessary to clarify what Part and Rule applies to "registered" or "licensed" persons and/or entities in the State of Colorado. Other

changes include spelling and miscellaneous technical amendments to conform the existing rules to the proposed amendments.

- 2) House Bill 1274 amended C.R.S. § 35-10-103 to add the definition of a private applicator, which defines a private applicator as a person who “uses or supervises the use of a pesticide for producing an “agricultural commodity.” C.R.S. § 35-10-114.5 requires any person who uses or supervises the use of a restricted use pesticide shall possess a valid private applicator license issued by the Commissioner. There is no State definition of “agricultural commodity” for CDA to refer to when it must determine if a private applicator is raising an agricultural commodity prior to certifying and issuing a private applicator license. CDA needs to verify that the license is being obtained and will be used in the manner intended. Upon request from EPA Region VIII, Part 1 was amended to create Rule 1.02 (k), which defines an “agricultural commodity”. The definition will help clarify for CDA and applicants that a private applicator must be engaged in the production of an “Agricultural Commodity”, as defined, to qualify to obtain a private applicator license which will allow them to purchase, apply, and supervise the use of restricted use pesticides on property they own or lease.
- 3) House Bill 1239 amended C.R.S. §35-10-116(6) of the Act to give the CDA the authority to “reinstate” an applicators license, within 180 days of its expiration, on the condition that all continuing education requirements had been met prior to the expiration date. The current language in Rule 2.46 addressed renewal requirements only. Rule 2.46 is amended by adding the licensure reinstatement provisions, outlined in C.R.S. §35-10-116 (6), for added clarity that an applicator may “reinstate” a license if certain provisions are met.
- 4) House Bill 1274 amended C.R.S. §35-10-115, which authorizes the CDA to begin issuing licenses to private applicators on and after January 1, 2007 and by adding a new statutory provision, C.R.S. §35-10-114.5, requiring any person acting as a private applicator using or supervising the use of restricted use pesticides be licensed as a private applicator by the Commissioner. Rule 2.50 is being repealed because it created a loophole that did not allow the CDA to enforce the provisions of the Act and Rules for someone acting as a certified operator if: they were a new employee, completed the private applicator exam issued by EPA Region VIII, their employer notified the department within 3 days and they completed the certified operator test within 14 days from their initial employment. EPA Region VIII will no longer be issuing private applicator licenses after January 1, 2007 and the CDA no longer wants to continue to allow a person to act in the capacity of a certified operator, which allows applications of RUPs in categories their employer is licensed in, without taking a closed book test, verifying that they have core knowledge of laws and regulations, applicator safety, public safety, environmental protection, use of pesticides, and pesticides and their families, to apply a “higher risk” pesticide in the general public.
- 5) House Bill 1274 amended C.R.S. §35-10-115, which authorizes the CDA to begin issuing licenses to private applicators on and after January 1, 2007. A new statutory provision, C.R.S. §35-10-114.5, requires any person acting as a private applicator using or supervising the use of restricted use pesticides be licensed as a private applicator by the Commissioner. Under H.B. 1274, C.R.S. §35-10-117 (1)(a) was amended to make it unlawful for any person to perform acts that require licensure as a private applicator. C.R.S. §35-10-118 (2)(b) and (c) authorize the Commissioner adopt Rules to establish qualifications for issuance and reinstatement of any license issued under the Act. These statutory changes require conforming amendments by the creation of a new Subpart D, part 2.48 through 2.58, which addresses private applicator licensure requirements, submission of information requirements, examination requirements, fee requirements, renewal and reinstatement provisions, supervision, licensure upgrades and reciprocity.

- 6) Under C.R.S. §35-10-118(2)(c) the Commissioner is authorized to adopt Rules for any disciplinary actions authorized under Title 35, Article 10. Part 2, Subpart E, “Licensure Actions, Suspension, Denial, Revocation”, Rule 2.59, was existing language that was moved from Part 7 of the Rules. This Rule outlines actions that constitute grounds for denying, suspending or revoking a business entity’s license or registration or an individual’s license. This section was moved from Part 7 to Part 2, which outlines business licensure and registration requirements and individual license issuance and renewal requirements, for clarity.
- 7) Add language to coincide with H.B. 1239, C.R.S. §35-10-118(3)(c), by adding clarifying language stating the commissioner or “his or her designated administrator shall” administer a general examination to qualified supervisors and certified operators and add “private applicator” to the current examination administration provisions set forth in Rule 3.1 and 3.2 to include private applicators as a result of H.B. 1279.
- 8) Repeal Rule 3.3, to remove unnecessary language from the Rule pertaining to when the examinations will be administered by the Commissioner.
- 9) Part 3, Rule 3.8, was amended by adding language to the existing exam security provisions, creating a section (a) pertaining to commercial applicators and a new section (b) pertaining to private applicators. Rule 3.8(a) outlines examination security provisions to prevent the content of CDA’s closed book commercial examinations from being disseminated by any person. Old language stated that an applicant or licensee could not remove examination material, but did not clearly make it a violation if an applicant cheated on the exam by bringing in outside information to reference during the test. New language has been added to make this a violation for any applicant or licensee.

Rule 3.8(a) currently states that an applicant or licensee shall not cause the “nature of” any exam question to be disseminated. It can be argued that any person that has ever taken an exam and then does pre-certification training for his or her company may unavoidably disseminate the “nature of” an exam question. The CDA feels the intent of Rule 3.8 was to prevent blatant dissemination of examination questions. Therefore, the words, “the nature of” were removed to more clearly define that an exam question or answer may not be disseminated to any person.

The private applicator exam is an open book test, which is not currently required to be proctored. Rule 3.8(b), outlines private applicator exam security provisions and was created to address circumstances that have been brought to the CDA’s attention that, in some instances, a private applicator has had someone else fill out their test answer sheet (a spouse or family member) or may have attended a workshop where the administrator blatantly gave them the answers to the exam. This Rule is established to make it a violation for any person to disseminate the answers of the private applicator exam to an applicant or licensee or to allow someone other than the applicant or licensee to fill out the examination form.

- 10) Amend Part 4, Subpart A’s title, “General Continuing Education Requirements for Qualified Supervisor and Certified Operator” to clarify that subpart A pertains only to qualified supervisors and certified operators.
- 11) Amend Part 4, Rule 4.3, to wordsmith the current notification of continuing education workshop provision for clarity and in Rule 4.5 language to clarify that the continuing education provisions must cover topics from subject areas and subtopics outlined in Subparts C through I, in Part 4 of the Rules.
- 12) Amend Part 4, Subpart B, Rule 4.6 through 4.10, to comply with H.B. 1274, C.R.S. §35-10-116(2) and §35-10-118(5) by adding new language outlining continuing education

requirements pertaining to private applicators. Subpart B outlines the number of continuing education credits needed, course approval requirements, course notification provisions, workshop sponsor reporting requirements, and that the continuing education provisions must cover topics from subject areas and subtopics outlined in Subpart C through H, in Part 4 of the Rules.

- 13) Amend Part 6, Records, of the Rules by the creation of a Subpart A and Subpart B.

Subpart A outlines the current recordkeeping requirements for commercial, registered limited commercial and registered public applicators.

Pursuant to H.B. 1279, C.R.S. 35-10-111, which added recordkeeping requirements for private applicators that use restricted use pesticides (RUP), the CDA has amended Part 6 by creating a Subpart B, Rule 6.05, which requires private applicators to maintain records of RUP applications, the elements of such records are currently required by the USDA under the Code of Regulations, 7 C.F.R., Part 110 (2006), which C.F.R. is referenced in Rule 6.05. C.R.S. 35-10-111 requires records to be kept for a minimum of 3 years, 1 year more than the USDA requirement, which is noted in Rule 6.05.

- 14) Part 7; amend Rule 7.02, by changing "licensee" from singular to plural to encompass private applicators. Clarifying statement.

- 15) Part 7, amend Rule 7.05 by adding language to exempt private applicators from this provision which requires licensed commercial, registered limited commercial, and registered public applicator employees to have a copy of the pesticide label at the site of application in case a question pertaining to the use of product, PPE, precautions, etc. come up during the course of the application. Adding this requirement for private applicators is not needed since all mixing, loading, and use are conducted on the private applicator's property and the pesticide product label should be on the property site for reference when questions arise.

- 16) Amend Part 11, with the creation of a new Subpart A and Subpart B to clarify pesticide storage requirements for commercial applicators, registered limited commercial applicators, registered public applicators, and private applicators.

Subpart A, Rules 11.01 through 11.08, is existing language that outlines storage requirements and equipment identification for commercial, registered limited commercial, and registered public applicators.

Subpart B, is new language that is specific to licensed private applicators. H.B. 1274, C.R.S. 35-10-117(1)(i) makes it a violation of the Act to store a pesticide in a manner inconsistent with label directions. Subpart B, Rules 11.09 through 11.11, reiterates this statutory provision, due to the fact that the pesticides licensed private applicators will be storing may be restricted use pesticides, by stressing that pesticides should be stored in a manner as to prevent an unreasonable risk to persons, property or animals, that they are stored in a manor that prevents damage to the container or label, and if stored in an outdoor pesticide storage area that the pesticide is protected from the elements to prevent the risk of damage to the container or label and avoid the creation of an unreasonable risk to persons, property, or animals.

- 17) H.B. 1239 amended C.R.S. 35-10-112 by expanding the notification of pesticide sensitive individuals to structural pest control operators. Part 12 of the Rules was amended to create a new Subpart A and Subpart B.

Subpart A, Rule 12.06 and 12.07, retains existing language pertaining to turf and ornamental notification requirements.

Subpart B, Rule 12.08 through 12.10, outlines the structural notification requirements for giving prior notice, methods that notice may be given, instructions if notification attempts fail, and emergency and specific product formulations that are exempt from the notification provision, created under H.B. 1239 and allowed under C.R.S. 35-10-112(2)(e) of the Act.

18.11. August 12, 2008 – Effective September 30, 2008

Statutory Authority

These amendments to these rules are proposed for adoption by the Commissioner of the Colorado Department of Agriculture (“CDA”) pursuant to his authority under the Pesticide Applicators' Act (the “Act”), §§ 35-10-118(2)(a)(b)(c), (4), (5), and (9), C.R.S.

Purpose

The purpose of these proposed rules is to:

1. Amend Rule 2.12 and 2.30 to define adequate supervision by establishing a qualified supervisor to certified operator/technician ratio.
2. Amend Rule 2.32 to clarify that any person who uses any pesticide without supervision while employed by a commercial, registered limited commercial or registered public applicator, must be licensed as a qualified supervisor.
3. Amend Rule 2.49 to clarify that licensed private applicators may only apply restricted use pesticides for the production of an agricultural commodity.
4. Amend Rule 2.59 clarify that an individual licensed in another jurisdiction outside Colorado may become licensed as a private applicator without examination.
5. Amend Rule 9.04 to clarify turf and ornamental notification provisions when making applications to multi-unit residential units when no on-site management person is present.
6. Create a new Rule 15.02 ad 15.03 to clarify that any person using a restricted use pesticide must be licensed as a qualified supervisor, certified operator or a private applicator.
7. Fix typographical errors, including:
 - Correct Rule 2.36 by replacing the word “retirements” with “requirements”
 - Clarify language in Rule 2.48
 - Correct Rule 2.50 by changing the stated date of license renewal eligibility from January 1, 2006, to January 1, 2007
 - Clarify Rule 8.04(f) by adding the omitted words “new hire” to the experienced technician language.

Factual and Policy Issues

The factual and policy issues encountered when developing these rules include:

- 1) Rule 2.12 and 2.30 states that if a licensee's or registrant's business operation is so extensive that one individual cannot "adequately" supervise all pest control recommendations, soliciting, mixing and loading, and applications of pesticides, more than one qualified supervisor must be employed by the licensee. CDA has historically interpreted this as requiring at least one qualified supervisor for each seven technicians, in order to ensure that s/he has the time and ability to provide the necessary on-site guidance and respond to an accident involving a pesticide spill posing a threat to health or the environment. Under the current Rule, which does not mandate a specific ratio of qualified supervisors to technicians, CDA has observed commercial applicators employing as many as 40 technicians in multiple business locations under the supervision of one qualified supervisor.

CDA is proposing to amend Rule 2.12 and Rule 2.30 to increase the maximum number of technicians that a qualified supervisor may supervise to fifteen (15), of which no more than eight (8) may be unlicensed technicians and clearly state that a qualified supervisor must be available while any technician is using a pesticide.

- 2) The current Rule 2.32 does not clearly state that any person working for a commercial, registered limited commercial or registered public applicator, must be licensed as a qualified supervisor to "use" any pesticide, as defined in Part 1.02(i) of the Rules, without supervision.
- 3) There have been questions as to the scope of pesticide use authorized under a Private Applicator license. CDA is proposing to amend Rule 2.49 by adding language to clarify that, consistent with EPA's interpretation of FIFRA, it is a violation of the PAA to use a private applicator license to use restricted use pesticides for other purposes than raising an "agricultural commodity," as that term is defined in Rule 1.02(k).
- 4) Rule 2.59 is the provision that allows qualified out-of-state licensed private applicators to reciprocate their license without having to take the Colorado private applicator exam. As currently phrased, however, this Rule states that a private applicator from another state may "perform" restricted use pesticide applications in Colorado without holding a Colorado license. That conflicts with § 35-10-114.5, C.R.S., which requires any Private Applicator using restricted use pesticides to have a Colorado license. The requirement in Rule 2.59 was intended to be similar to the provision for qualified supervisors and certified operators in Rule 2.48.

CDA, therefore, is proposing to amend Rule 2.59 to correctly state, "An individual certified or licensed by another jurisdiction outside Colorado as a private applicator may obtain a Colorado private applicator license without passing an examination..." and amend Rule 2.48 to make the language of the two provisions consistent.

- 5) Rule 9.04 (a) and (b) requires an applicator to leave a written statement at the time of application that a pesticide has been applied stating the pesticide or pesticides applied, the date of application, and any precautionary information for each person residing on the property, and to provide this same written statement to the owner of the site or agent of the owner of the site if s/he is not present. The current rule does not clearly address notification of residents of multi-unit residential dwellings (apartments, condos, townhomes, etc) where there is no property manager on-site.

CDA is proposing to amend Rule 9.04 to specify the manner in which notification must be provided when making applications at multi-unit dwellings when no on-site management is present at the site.

- 6) Now that it has jurisdiction over all pesticide use, CDA believes it is useful to clearly state in a new Rule 15.02 that any person using a restricted use pesticide must be licensed as a qualified supervisor, certified operator or a private applicator.
- 7) Rule 2.36 contains a typographical error. Rule 2.36 currently states, “the Commissioner may waive part of the experience retirements...” The Rule should read, “the Commissioner may waive part of the experience requirements.”
- 8) Rule 2.50 contains a typographical error. Rule 2.50 currently states, “Licenses issued by the Environmental Protection Agency prior to January 1, 2006 cannot be renewed.” The Rule should read, “Licenses issued by the Environmental Protection Agency prior to January 1, 2007 cannot be renewed”.
- 9) In promulgating Rule 8.04(f) CDA inadvertently omitted the words “new hire.” These words are necessary clarify that the required technician training hours outlined in 8.04(f)(1 – 4) apply to a “new hire” experienced technician, as defined in Part 5, Rule 5.1 (b)(1).

18.12. December 9, 2008 – Effective January 30, 2009

Statutory Authority

These amendments to these rules are proposed for adoption by the Commissioner of the Colorado Department of Agriculture (“CDA”) pursuant to his authority under the Pesticide Applicators' Act (the “Act”), §§ 35-10-118(2)(b), C.R.S.

Purpose

The purpose of these proposed rules is to:

Amend Rule 15.02 to clarify that any applicator technician may use a restricted use pesticide under the on-site supervision of a qualified supervisor and mix and load a restricted use pesticide under the supervision of a qualified supervisor.

Factual and Policy Issues

The factual and policy issues encountered when developing these rules include:

The Office of Legislative Legal Services review of the Department's recently adopted new Rule 15.02(i), which went into effect on October 1, 2008, determined that the Rule was more restrictive with respect to the supervisory requirements for the mixing and loading of a restricted use pesticide by a technician than the Act itself. The new proposed Rule 15.02(i) eliminates this conflict by distinguishing the mixing and loading of a restricted use pesticide from its actual application.

18.13. October 21, 2010 – Effective November 30, 2010

Statutory Authority

These amendments to these rules are proposed for adoption by the Commissioner of the Colorado Department of Agriculture (“CDA”) pursuant to his authority under the Pesticide Applicators' Act (the “Act”), §§ 35-10-118(2)(a) & (b), C.R.S.

Purpose

The purpose of these proposed rules is to amend conflicting language between the Rule and statute in regards to sales technicians. All other proposed Rule amendments add clarification to the current interpretation, enforcement and intent of the existing Rules. Specifically:

- 1) Part 1.02 (f) is amended to add the definition of “pasture”.
- 2) Part 5.2 is amended to allow sales of a restricted use pesticide “under the supervision” of a qualified supervisor once all required training has been met, in accordance with statute.
- 3) Part 8.01, agricultural licensure classifications, are being amended to add additional examples of the types of applications allowed in each licensure category.
- 4) Part 12.06, ornamental notification, is being amended to more clearly explain pesticide sensitive person notification requirements.
- 5) A new 15.04 is being created to clearly state that a pesticide applicator must hold the appropriate category of licensure to use or supervise the use of a restricted use pesticide.

Factual and Policy Issues

The factual and policy issues encountered when developing these rules include:

1. The CDA has found that the current licensure category descriptions do not provide a clear explanation of similar geographic areas. To help distinguish between Rangeland and Agricultural pasture areas, a new Part 1.2(f) is being created to add the definition of “pasture” is to help clarify the difference between agricultural applications vs. rangeland applications in Part 8.
2. The current language in Rule Part 5.2, that outlines technician training requirements and the allowed activities of a sales technician, conflicts with the statutory definition of a technician in § 35-10-103(15)(a)(III), C.R.S. The amendment will match the Rule with the statutory definition to allow sales of a restricted use pesticide “under the supervision” of a qualified supervisor once all required training has been met.
3. Agricultural licensure classifications are explained in Part 8.01 of the Rules. The CDA has found that the current licensure category descriptions do not provide a clear explanation of similar geographic areas, therefore making it difficult for an applicator to know what licensure category they must hold. Part 8.01 (f), (g) and (i), which are the Forest Pest Control, Rangeland Pest Control and Industrial and Right-of-Way Pest Control licensure categories have similar geographic and landscape features, but are inherently different based on the site of application and the types of applications occurring in each area. Part 8.01 (f), (g) and (i) are being amended to add additional examples of the types of geographic or landscape features found in each of these categories to provide additional guidance to pesticide applicators on what category they must carry to perform applications in these areas.
4. § 35-10-112(1)(c)(I), C.R.S. and Part 12.06, ornamental notification, currently state that a pesticide sensitive person must be notified of “any” turf or ornamental application occurring to an abutting property. Each separate application, in accordance with § 35-10-111, C.R.S., record-keeping requirements, requires a separate record be kept for each separate application. In situations where two abutting properties are being treated on the same day, the CDA has interpreted that the notification requirement that “any” application would require the applicator to inform the pesticide sensitive person of each separate application taking place. Part 12.06, ornamental notification, is amended to more clearly state that a pesticide applicator must notify the pesticide sensitive person of each and

every location where pesticide applications are being made and in a manner that the pesticide sensitive person can identify which abutting property is being treated to take the necessary precautions to avoid adverse effects to themselves or their property.

5. The PAA requires all persons who want to obtain a qualified supervisor, certified operator or private pesticide applicator license to pass an examination and license in the pesticide application category in which they intend to make RUP applications. The PAA also requires that a business must have a qualified supervisor in its employment in the pesticide category(s) it intends to make commercial applications in. The intent in the business and applicator licensure requirements is that the applicator be restricted to use pesticides intended for and perform commercial activities only in the licensure category(s) held. A new Part 15.04 is being created to clearly state that a pesticide applicator must hold the appropriate category of licensure to use or supervise the use of a restricted use pesticide. This amendment will clearly state this rather than having to reference multiple areas of the PAA.

18.14. June 11, 2013 – Effective July 30, 2013

Statutory Authority

These amendments to these rules are proposed for adoption by the Commissioner of the Colorado Department of Agriculture (“CDA”) pursuant to his authority under the Pesticide Applicators’ Act (the “Act”), §§ 35-10-118(2)(a) & (b), and (9.5) C.R.S.

Purpose

The purpose of these proposed Rules is to clarify the Rule in regards to solicitations made prior to entering into a contract, create a new Rule to require that a record of active Endangered Species Bulletins be maintained and add a new Rule defining devices that produce a pesticide; which when used for hire require a commercial pesticide applicator license. All other proposed Rule amendments add clarification to the current interpretation, enforcement and intent of the existing Rules. Specifically:

1. Parts 2.15 and 2.16 are amended to clarify when solicitations to subcontract incidental pesticide applications can be made by a business that is not acting as and is not licensed as a commercial applicator.
2. Part 2.60 creates a new Rule defining the Private Applicator category and license purpose.
3. Part 6.03(k) creates a new Rule to require commercial applicators to maintain a record of any active Endangered Species Bulletin.
4. Part 7.05 is amended to clarify what labeling must be in the applicator’s possession when applications are being performed and exempt Endangered Species Bulletins from this requirement.
5. Parts 8, 9 and 10 are amended to add the numeric category reference to each pesticide licensure category.
6. Parts 8.01(f),(g) and (h) and Part 10.01 (b) are amended to clarify which pests may be treated under these categories.
7. Part 10.02 is amended to correctly state the licensure category.
8. Part 15.05 creates a new Rule requiring that devices that produce a pesticide, such as carbon monoxide, that when used for hire to control a pest requires a commercial applicator license.

Factual and Policy Issues

The factual and policy issues encountered when developing these rules include:

1. Part 2.15 allows a business that does not apply pesticides for hire to enter into a contract that incidentally requires the application of pesticides as long as there is a written provision in the contract expressly stating that the business will subcontract the application to a licensed applicator. Part 2.16 similarly allows a business that applies pesticides for hire and is licensed as a commercial applicator to subcontract applications that require a qualified supervisor licensed in a category not held by the business's own qualified supervisors, to subcontract the work if the contract expressly discloses that plan. Absent such statements, the Department would consider such contracts to constitute violations of the statutory provision, § 35-10-117(1)(c), C.R.S., which makes it a violation of the Act to present oneself to be qualified to perform or to solicit pesticide related services without a "valid commercial license." The Department realizes that in order to enter into such contracts, businesses must necessarily engage in some form of a solicitation – i.e., they must make an offer to their potential customers, whether oral or written. These amendments to Parts 2.15 and 2.16 clarify that a business proposing to enter into a contract with such a subcontracting provision must also disclose that they will subcontract pesticide applications that require licensure beyond what they hold at the time of the solicitation.
2. Part 2.60 is being created as a result of amendments being made to Parts 8, 9 and 10, to add the numeric categories for all pesticide licensure categories. When creating the language to classify a Private Applicator license as Category 401, the Department felt that stating the purpose of this licensure category would more clearly define what the license may be used for and match the category classification definitions in Parts 8, 9 and 10 of the Rules.
3. Part 6.03(i) creates a new Rule to require commercial applicators to maintain a record of any active Endangered Species Bulletin.

The Environmental Protection Agency in recent years has added Endangered Species (ES) specific language to certain pesticide labels that require pesticide applicators to obtain and abide by the Endangered Species Protection Bulletin. The requirements in an ES Bulletin are enforceable because compliance is mandated by the label. Therefore, applicators must follow all requirements on the ES Bulletin and failure to do so would be a label violation under both the Federal Insecticide, Rodenticide and Fungicide Act (FIFRA) and the PAA. In addition, as a condition of the EPA enforcement grant CDA is required to verify compliance with all elements of the label. EPA also has specified in our grant that the CDA must determine applicator compliance with the Endangered Species Act by verifying that applicators are referencing the ES Bulletins when required. In 2012 Colorado's first ES Bulletins for Rozol Prairie Dog Bait came into existence and ES Bulletin language is showing up on labels regularly now. The best way for CDA to verify that an applicator has referenced the ES Bulletin and followed all use restrictions for the pesticide, county and month the application was made is to require that the applicator maintain a copy of any active Bulletin that pertains to applications they have made in their records. A record of the Bulletin will only be required to be maintained when there is an active Bulletin for the product, county and month in which the application took place.

4. The intent of Part 7.05 is to require an applicator to have the original or a copy of the original pesticide label and any additional labeling directions in the possession of the applicator at the time of an application so all use directions are available at the job site. Currently Part 7.05 states, "...a copy of the pesticide label and any attached labeling for each product in use shall be in the possession of the commercial...applicator..." The word "attached" no longer represents how labels and labeling may be accessed with new technologies. Labels and labeling are now more likely to be downloaded from the registrant's or EPA's website and maintained electronically. Some products do not have labeling physically "attached" to a product. Therefore, the Department feels that changing the word "attached" to the word "associated" would clearly state the requirement of Part 7.05, which is to have copies of the pesticide label and all of its

associated labeling. The word “copies” does not designate or restrict the form or manner in which the label copy must be in the applicator’s possession.

The definition of “labeling” found in the Pesticide Act in relation to the Endangered Species (ES) Bulletins excludes “current official publications” of the EPA. ES Bulletins are publications of EPA that are not created and distributed with the pesticide label. CDA is proposing to add a clarifying statement that, for the purposes of Part 7.05, ES Bulletins are not required to be in the possession of the applicator at the time of the application, since an ES Bulletin is not “labeling”. It should be noted, however, that any requirements in an ES Bulletin are enforceable because compliance is mandated the label. Therefore, applicators must still follow all requirements on the ES Bulletin just as any other requirement on the label and failure to do so would be a violation of the PAA. CDA felt clarification is needed in Part 7.05 so applicators understand that although they must have a copy of the label in their possession at the time of application, they are not required to have the ES Bulletin in their possession. CDA is proposing to amend Part 7.05 to clearly state the ES Bulletin is not required to be in the applicator’s possession at the time of an application.

5. Parts 8, 9 and 10 are amended to add the numeric category reference to each pesticide licensure category. CDA routinely refers to pesticide applicator licensure categories with a numeric reference in publications, enforcement documents, license documents, examination documents, etc.; i.e.: Category 101, Agricultural Insect Control. CDA is proposing that all licensure category descriptions in Parts 8, 9 and 10 be amended to reflect the appropriate numeric category reference number to ensure Department publications, administrative documents and enforcement documents legally coincide.
6. Recently the question was brought to the Department’s attention, asking if rodents can be treated in rangeland areas with the Rangeland Pest Control Category vs. the Outdoor Vertebrate Control Category. The licensure category description in the Rangeland category is a very broad, stating that this category is for the “application of pesticides to rangeland”. Arguably this language would allow the applications of any pesticide, including those applied to rodents in Rangeland areas. However, the Outdoor Vertebrate licensure category clearly states that the Outdoor Vertebrate Pest Control category must be held to apply pesticides to control outdoor vertebrate pests, regardless of the site they inhabit; adding to the confusion.

The original intent of the Rangeland category was for the application of pesticides to rangeland areas for pests other than rodents, i.e.: weeds, insects, etc. The Outdoor vertebrate category was intended to apply pesticides for the control of vertebrate pests, regardless of the site they may be found (i.e.: water, rangeland, structures, pasture, right-of-way, etc.). During our review, we found this broad statement not only in the Rangeland category but also in the Forestry and Aquatic categories, making the licensure requirements confusing unless the applicator reads the Outdoor Vertebrate licensure category with these other definitions. Even then, it is not clear if the Outdoor Vertebrate Pest Control license would be needed.

The other licensure categories do have specific descriptions as to what that licensure category does and does not allow. For example:

- 8.01 (a) Agricultural Insect Control: the application of pesticides to agricultural plants, including applications performed on pastures, croplands and non-crop agricultural lands, to control invertebrate pests, including insects, mites, slugs, snails, and nematodes.
- 8.01 (j) Public Health Pest Control: the application of pesticides for control of disease vectors, except vertebrates.
- 9.01 (a) Turf Pest Control: the application of pesticides to: (1) turf to control invertebrate pests, including insects, mites, slugs, snails, and nematodes, or to control plant diseases or weeds; or (2) ornamental beds to control weeds.

The CDA is proposing that the Rangeland Pest Control and Forest Pest Control category definitions be amended to clearly state that these categories allow the application of pesticides to be applied to control pests “except vertebrates”, as similarly stated in the Public Health Pest Control Category.

During our discussion with the Pesticide Advisory Committee it was pointed out that amphibian and fish pest control is currently under the Outdoor Vertebrate Control category. It was recommended that the Department allow these vertebrate pests to be treated under the Aquatic Pest Control license, since the pesticide applications are being made directly to water. The Department agreed with this reasoning and therefore is proposing to clarify the licensure requirements for controlling vertebrate pests in and out of water in the Part 8.01(h), Aquatic Pest Control and Part 10.01(b), Outdoor Vertebrate Pest Control.

7. CDA recently identified a discrepancy in Part 10.02, which outlines the structural pest control experience requirements for licensure as a qualified supervisor. The current language incorrectly references the Residential/Commercial Pest Control licensure category, found in Rule 10.01 (d), as “household pest control”. The Department believes this was an oversight in the terminology when the Rule was originally enacted, since nowhere in the PAA is “household pest control” referenced as a license category. CDA proposes to amend Part 10.02 to remove the reference to “household pest control” and correctly state the licensure category referenced in Part 10.01(d), Residential/Commercial Pest Control.
8. In FY 2012 it was brought to the attention of the Department that a licensed commercial applicator wanted to use a device, called the Pressurized Exhaust Rodent Control (PERC), to convert gasoline to carbon dioxide (and other gases) and then pump carbon monoxide into a building void (in a strip mall) to treat bird mites and other pests associated with a bird infestation. The PERC is a device intended to only control rodents; it generates carbon monoxide with an attached engine, pressurizes it into a large tank, and the gas is then pumped into rodent burrows. The directions prohibit use on structures and recommend the applicator maintain a 150 ft. buffer from structures.

Under 35-10-118 (9.5) - Powers and duties of the Commissioner, adopted as a result of the 2006 Sunset review, it states:

The Commissioner shall designate by rule which devices, when operated for hire, require the operator to be licensed as a commercial applicator. Licensure shall be required only for the use of those devices that, as determined by the Commissioner, may constitute a significant risk to public health or safety.

Since the CDA does not currently have any devices in Rule designated to require licensure, the CDA has no regulatory authority over individuals using these devices. Therefore, the CDA cannot require licensure when using these devices for hire or take any enforcement action on a commercial applicator when the device is used incorrectly, even when it would cause a risk to the public's health or safety.

The CDA is proposing the creation of a new Rule 15.05 that requires licensure for the use of any device that generates/produces a pesticide as defined in the Pesticide Applicators' Act § 35-10-103(10), C.R.S., to help ensure public safety, by requiring applicators have the proper training and licensing to use any device for hire that produces a pesticide. In addition, Rule 15.05 requires the applicator to use the device in accordance with the manufacturer's directions.

18.15. February 12, 2014 – Effective March 30, 2014

Statutory Authority

These amendments to these Rules are proposed for adoption by the Commissioner of the Colorado Department of Agriculture ("CDA") pursuant to his authority under the Pesticide Applicators' Act (the "Act"), §§ 35-10-118(2)(a) & (b), and (9.5), C.R.S.

Purpose

The purpose of these proposed Rules is to clarify the procedures that must be used when operating a device that produces a pesticide, specifically carbon monoxide; which when used for hire requires a Commercial Applicator license. Specifically:

- 1) Part 1.02 is amended to add the definition of a device that is regulated under this article.
- 2) Parts 6.01 and 6.03 are amended to reference record keeping requirements for the use of a device that generates a pesticide in Part 15.07 of these Rules.
- 3) Parts 10.04 and 10.05 are amended to include devices in the post application notification requirements.
- 4) Part 15.05 is amended and creates new Rules clarifying the pest and sites of application allowed with a device that generates a pesticide.
- 5) Parts 15.06 (a) and (b) create new Rules that outline the procedures and requirements a Commercial Applicator must follow when making applications within specified distances from occupied structures.
- 6) Part 15.07 creates a new Rule specifying the records Commercial Applicators that use devices that generate a pesticide must maintain.

Factual and Policy Issues

The factual and policy issues encountered when developing these Rules include:

- 1) In FY 2012 it was brought to the attention of the Department that a licensed Commercial Applicator wanted to use a device, called the Pressurized Exhaust Rodent Control (PERC), to convert gasoline to carbon monoxide (and other gases) and then pump carbon monoxide into a building void (in a strip mall) to treat bird mites and other pests associated with a bird infestation. The PERC is a device intended to only control rodents; it generates carbon monoxide with an attached engine, pressurizes it into a large tank, and the gas is then pumped into rodent burrows. The directions prohibit use on structures and recommend the applicator maintain a 150 ft. buffer from structures.

Section 35-10-118 (9.5), C.R.S., powers and duties of the commissioner, adopted as a result of the 2006 Sunset review, states:

The commissioner shall designate by rule which devices, when operated for hire, require the operator to be licensed as a commercial applicator. Licensure shall be required only for the use of those devices that, as determined by the commissioner, may constitute a significant risk to public health or safety.

The CDA passed a new Rule on July 30, 2013, to require licensure for any person that uses any device that generates/produces a pesticide as defined in the Pesticide Applicators' Act § 35-10-103(10), C.R.S., to help ensure public safety by requiring applicators to have the proper training and licensing to use any device for hire that produces a pesticide. This rule also requires commercial applicators to follow label directions for such devices.

- 2) After the Rule hearing it was brought to the attention of the Department that current device directions may restrict applications around and up to a structure, impacting a Commercial Applicator's business negatively.
- 3) After the Rule hearing it was brought to the attention of the Department that these devices could be built by an individual and no "directions" would be associated with these devices used for hire, therefore there would be no way to ensure the device would be used in a manner that would not create an unsafe situation for the public.
- 4) In the normal registration process of a pesticide the Environmental Protection Agency (EPA) assesses the risk of using a pesticide and directs registrants on what labeling use directions or restrictions are needed. EPA only requires manufacturers of devices to register their device with EPA and they register an EPA establishment number. With respect to devices, EPA does not review their efficacy or risk created by their use. Neither does it review or require directions for use to be submitted to or approved by them. Therefore, to ensure public safety, this requirement fell on the Department and necessitated the development of these Rules.
- 5) The Department obtained input from USDA and the Colorado Department of Public Health and Environment (CDPHE) when creating this Rule. CDPHE generated modeling data showing the potential amount of carbon monoxide that could leak into a structure. This data showed that in certain circumstances carbon monoxide levels could rise to deadly levels within minutes and create a situation where adverse impacts to health and safety were possible, including death.
- 6) Part 1.02 (m) was created to define devices for which licensure is required and link their definition to "pesticides". This allowed all PAA licensure and business requirements for the use of a pesticide for hire to be extended to devices being used for hire where applicable.
- 7) Parts 6.01 and 6.03 were amended to clarify that recordkeeping requirements pertaining to the use of a device that requires licensure are outlined in Part 15.07 of the Rule.
- 8) Parts 10.04 and 10.05 were amended to address customer notification requirements for the use of devices that require licensure. The Rule now requires licensees using a device requiring licensure to meet similar notification requirements to the customer as for other pesticide applications, including providing the date and time of application and any precautionary statements from the device directions.
- 9) Part 15.05 was amended to clarify that it is a violation to use a device that generates a pesticide in a manner inconsistent with these Rules. It requires that these devices may only be used for burrowing rodent control and that the Commissioner may approve other uses if the Commissioner can determine that such use will not pose a risk to the public health or safety.
- 10) Part 15.06 was created to allow device applications up to the foundation of occupied structures. Part 15.06 (a) specifies the distances within which additional precautions must be taken. The additional precautions outlined in 15.06(b) are intended to ensure that occupants of structures will not be exposed to carbon monoxide in situations where carbon monoxide accidentally leaks into a structure. The precautions include evacuating the structure and require the applicator to "clear" the structure with a carbon monoxide monitoring device prior to allowing any occupants back into the structure. Part 15.06(b) also requires information be provided to the customer on carbon monoxide poisoning symptoms and directions to evacuate and seek medical attention, should they have symptoms following the application.
- 11) Part 15.07 was created to require recordkeeping of device applications. These recordkeeping requirements will allow the Department to investigate the proper use of a device in the case of a complaint and to ensure applicators are complying with the application precautions and requirements outlined in Part 15.06.

18.16. Adopted November 10, 2015 – Effective December 30, 2015.

Statutory Authority

These amendments to these Rules are proposed for adoption by the Commissioner of the Colorado Department of Agriculture (“CDA”) pursuant to his authority under the Pesticide Applicators' Act (the “Act”), §§ 35-10-109(2) and 35-10-118(2), C.R.S.

Purpose

The purpose of these proposed Rules is to adopt new Rules to: (1) meet the requirements of training specified in SB 15-119; (2) re-define commercial business locations; (3) create a new Post Harvest Potato Pest Control licensure category; (4) allow for electronic notification of pesticide applications and; (5) make necessary conforming language changes. Specifically:

- (1) Rule 1.02 is amended to add the definition of a “ready to use pesticide”.
- (2) Rule 5 is amended to fix a typographical error from previous Rules.
- (3) Rule 5.02 is amended to clarify that the technician training required in Rule 5.02 does not apply to non-registered limited commercial applicator and non-registered public applicators.
- (4) Rule 10.01 is amended to create a new Post Harvest Potato Pest Control category and provides for the award of the category for existing licensees holding the Stored Commodities Treatment category and for licensure and renewal requirements after January 1, 2016.
- (5) Parts 8, 9 and 10 are amended to allow for electronic notification of pesticide applications.
- (6) Part 11 is amended to correctly state new terminology regarding “safety data sheets”.
- (7) Update address of the Department.
- (8) Create a new Part 16 to address training requirements as a result of SB 15-119 for non-registered limited commercial applicators and non-registered public applicators. This Part outlines what training is required for the use of certain general use pesticides, when training is required, how training can be met and recordkeeping requirements.
- (9) These amendments incorporate changes as a result of the Department's Regulatory Efficiency Review Process.

Factual and Policy Issues

The factual and policy issues encountered when developing these Rules include:

- (1) The current Stored Commodities Treatment category focuses on the fumigation and treatment of raw grains in storage facilities; such as silos and grain bins. It was brought to the Department's attention that post-harvest potato treatments, which have been conducted under the current Stored Commodities category since the 90's, are significantly different in the equipment required and knowledge needed to conduct these specialized pesticide applications. The Department verified this and in the course of considering this licensure category found several other states that have significant potato agricultural industries have a specific post-harvest potato treatment licensure category. Since the Department's current Stored Commodities Treatment category does not adequately address post-harvest potato treatments and due to the complexity and knowledge needed to perform these applications, the Department is proposing this new licensure category.

The study guide and exam was done in cooperation with post-harvest potato treatment applicators.

- (2) The proposed Rule 10.01 (h) will provide for licensees with the current Stored Commodities treatment category to be awarded the Post-Harvest Potato Treatment category, because under the Stored Commodities category they were already allowed to perform these applications prior to the creation of this new licensure category, and outlines the time frames when examination, continuing education and renewal are required.
- (3) The Department was approached by industry to consider a Rule change to allow required notices of pesticide applications outlined in Rules 8.03, 9.04 and 10.06 to be provided electronically to their customers. As technology has evolved more commercial applicator customers request that these notices of pesticide applications be sent via electronic means, rather than posting a written paper notification on a door that they may never enter. The proposed Rules in 8.03, 9.04 and 10.06 provide a means for commercial applicators to confirm and maintain a record that their customer has requested an electronic notice and clarifies the circumstances when an electronic notice can and cannot be used in place of written notification.
- (4) Rule 10.07 is a new Rule addressing notification in multi-unit structures when common areas have been treated, which had previously not clearly required posting. The Department added this additional clarification due to on-going complaints that structural applications made to common areas are not adequately communicated to persons living in the structure who must pass through these areas to gain entry to their unit.
- (5) As a result of SB 15-119, a new Part 16 has been created to address the new training requirements for any owner or designee of a non-registered limited commercial applicator and any employee of a non-registered public applicator making applications with a general use pesticide. During the Department's discussions with the Department of Regulatory Agencies, this recommendation was made to address concerns expressed during the Pesticide Applicator Act Sunset review by those that felt that a higher level of training should be required for non-registered limited commercial and non-registered public applicators that make similar pesticide applications as those made by commercial applicators and who are held to a higher standard of training and knowledge. Additional training for individuals making pesticide applications in areas that are considered "sensitive sites", such as schools and health care facilities, were a concern as well. The Department took into consideration comments received from industry and during the legislative session that antimicrobial pesticides, i.e.: cleaning products, or those that were packaged in a ready to use containers that do not require mixing or loading of the pesticide into separate containers and limit the user to smaller quantities that limit potential exposures to the end user or public were beyond the scope of pesticide use that should require this additional training.
- (6) The Department is proposing the following new Rules to address SB 15-119. Rule 1.02(i) provides the definition of a "ready to use" pesticide. Rule 16.01 outlines the scope of whom this Rule applies to. Rule 16.02 clarifies what general use pesticides require training to use. Rule 16.03 clarifies what general use pesticides do and do not require training. Rule 16.04 outlines what core pesticide safety training subjects must be covered and the manner in which the training may be met. Rule 16.05 clarifies how often the training must be conducted and Rule 16.06 outlines how long records of the training must be maintained.
- (7) The Rules are being amended to address typographical errors, make conforming language changes and update verbiage to current regulatory references.

18.17. Adopted February 10, 2016-Effective March 30, 2016

Statutory Authority

Amendments to these Rules are proposed for adoption by the Commissioner of the Colorado Department of Agriculture (“CDA”) pursuant to his authority under the Pesticide Applicators’ Act (“PAA”) Sections 35-10-118(2), 35-10-117(1)(i) and 35-10-117(2)(a), C.R.S.

Purpose

The purpose of these Rules is to establish the criteria for determining which pesticides may be used in the cultivation of cannabis to prevent unsafe use. They also change the recordkeeping period for Private Applicators. Specifically these Rules:

- (1) Create a new Part 17 which specifically addresses the use of pesticides in the production of cannabis;
- (2) Create a new Rule 17.01 which establishes definitions specific to “cannabis”, “human consumption”, and “tolerances”;
- (3) Create a new Rule 17.02 which provides that the Department will publish the list of pesticides that meet the criteria for use on cannabis;
- (4) Create a new Rule 17.03 which provides that all pesticides used in the cultivation of cannabis must be registered with the Department;
- (5) Create a new Rule 17.04 which establishes the criteria for determining which pesticides may be legally used in the cultivation of cannabis in accordance with Sections 35-10-117(1)(i) and (2)(a), C.R.S., which prohibits the use of pesticides in an unsafe manner;
- (6) Create a new Rule 17.05 which allows the Commissioner to prohibit the use of any pesticide product on cannabis if he determines that such use may pose a significant threat to public health and safety or the environment, even though it otherwise satisfies the criteria for use on cannabis in Rule 17.04; and
- (7) Update Rule 6.05 to match the two year private applicator recordkeeping requirement in the PAA.

Factual Policy and Issues

The factual policy and issues encountered when developing these Rules include:

- (1) The use of pesticides in Colorado is regulated under the Pesticide Applicators’ Act, Sections 35-10-101 – 128, C.R.S. Pesticide regulation is based on the labeling of the pesticide product, the language of which is enforceable under the PAA. Because cannabis is not a specifically listed crop on any label currently registered with the Department, products with broad label statements that do not prohibit use on cannabis are currently the only ones that may be used legally on cannabis in Colorado.
- (2) These Rules and criteria are being established to allow the use of certain pesticides in the cultivation of cannabis based on the available science and information the Department can confirm at this time. Without these Rules and the criteria they set out, the use of a pesticide that has not had a tolerance established for use on edibles (food), or the use of a pesticide that is not intended to be consumed through inhalation by smoking, could be allowed on cannabis by a broadly worded label, even though such use would be “unsafe” under Sections 35-10-117(1)(i) and (2)(a), C.R.S.
- (3) Both the PAA and the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) require that all pesticides be applied in strict accordance with the label directions for the

particular product. As part of the directions for use, pesticide labels specify the particular crops and/or sites to which they can be applied. Depending on the particular pesticide, the crops/sites listed on the label can be expressed very specifically (e.g., “wheat”), or more generally (e.g., “grain crops”). While a pesticide with a label that specifies “wheat” can only be applied to wheat, a pesticide that lists “grain crops” on the label can be applied to wheat, barley, oats, rye, etc. In determining which pesticides, if any, may be used legally on cannabis, CDA initially consulted with the U.S. Environmental Protection Agency (EPA) as to whether there might be any general crop groups, such as herbs, spices or vegetable gardens, into which cannabis might fit (note: there are no registered pesticides that specifically list cannabis as a crop on the label). The current position of EPA is that cannabis is not an herb, a spice or a vegetable. However, EPA agrees that, depending on actual label language, it is not a violation of a pesticide label under the PAA or FIFRA to use the product on cannabis if it has certain, very generally worded descriptions of crops/sites on the label, and the product’s active ingredient is exempted from the requirement of a tolerance.

- (4) Tolerances are established by EPA in accordance with the Federal Food and Drug Cosmetic Act, U.S.C. Title 21, Section 408. A tolerance is the maximum amount of the active ingredient of a pesticide product that is allowed to remain in or on a food crop as residue after application of the product. Pesticide products that have significant toxicity, which could pose a hazard to public health if threshold amounts are exceeded when consumed and could result in acute or chronic poisoning, are required to have tolerances established by EPA. Tolerances for a given active ingredient typically vary depending on the specific food crop to which it is applied. EPA sets tolerances by determining that there is a reasonable certainty that no harm will result from aggregate exposure to the pesticide chemical residues at the tolerance levels established, including all anticipated dietary exposures. Exemptions from tolerances are established under 40 CFR, Part 180, Subpart D: 180.900: “... An exemption from a tolerance shall be granted when it appears that the total quantity of the pesticide chemical in or on all raw agricultural commodities for which it is useful under conditions of use currently prevailing or proposed will involve no hazard to the public health.”
- (5) Section 3 of FIFRA provides EPA the authority and 40 C.F.R., Parts 150-167, outline the requirements to register a pesticide with EPA. Pesticide labeling is derived through EPA’s risk assessments required to be conducted as a condition of registration that determine the manner and rates of application in which a pesticide may be used on a site or a crop without resulting in adverse impacts to public health or the environment. To date no risk assessments have been conducted specifically for pesticide use on marijuana.
- (6) Risk assessments have been conducted to determine what pesticide active ingredients are tolerance exempt. EPA has determined that for those active ingredients determined to be tolerance exempt, “...the total quantity of the pesticide chemical in or on all raw agricultural commodities...will involve no hazard to the public health.”
- (7) EPA requires that a pyrolysis study be conducted during the risk assessment process for products intended to be smoked such as tobacco, unless EPA has exempted the pesticide from pyrolysis studies due to the nature of the pesticide.
- (8) The Colorado Food and Drug Act (CFDA) provides the Colorado Department of Public Health and Environment (CDPHE) with authority over cannabis contaminated with pesticide residues (“adulterated” under the CFDA) that is very similar to the authority used by the Food and Drug Administration to deal with pesticide contamination of all other agricultural crops. The CFDA gives CDPHE specific authority over “unsafe” “pesticide chemicals” in “raw agricultural commodities,” the definition of which is broad enough to include cannabis which is grown, harvested and then processed and sold for

consumption through various means, including ingestion as a component of food (in edibles).

Under the CFDA, “food” is defined to mean “articles used for food or drink for man or other animals...and articles used for components of any such article.” C.R.S. § 25-5-402(11). “Food” includes any “raw agricultural commodity,” which is “any food in its raw or natural state....” C.R.S. § 25-5-402(21). Cannabis, which is grown and used as a component in many forms of edible food products, thus qualifies as a raw agricultural commodity under the CFDA. Although not all cannabis is used in edibles (“food” under the CFDA) cannabis can be used for any purpose after harvest, including food use, thus warranting treatment of all cannabis crops as a food for pesticide regulation purposes. Under Section 25-5-410(1)(b)(II) of the CFDA, “a raw agricultural commodity” is “deemed to be adulterated” if “it bears or contains a pesticide chemical which is unsafe within the meaning of Section 25-4-413(1)” unless the concentration of the residue is less than the tolerance set for the commodity or is tolerance exempt as provided for in Section 25-5-413(1). Section 25-5-413(1) in turn states that, “[a]ny pesticide chemical in or on a raw agricultural commodity...shall be deemed unsafe for the purpose of application of Section 25-5-401(1)(b)” unless there is a tolerance established for that crop and the residue level is within that tolerance. Thus unless a pesticide found on a cannabis crop has a tolerance for use on cannabis or is tolerance exempt, its presence in any amount on cannabis constitutes adulteration that renders the cannabis unsafe for human consumption under the CFDA as a matter of law. These Rules reflect and follow the General Assembly’s determination in the CFDA that consumption of food containing pesticides without a tolerance or exemption is unsafe. The Rules thus prohibit the application of such pesticides to cannabis as similarly unsafe as under the PAA in order to prevent adulteration from pesticides as addressed in the CFDA from occurring.

This approach for regulating pesticide use in order to prevent contamination of cannabis is the same as EPA and CDA apply to any other multipurpose-purpose agricultural commodity that can be used in food after harvest. It reflects the fact that neither EPA nor CDA have any way of knowing or controlling what a grower of such crop chooses to do with the crop once harvested. For example, under EPA’s registration system, any pesticide labeled for use on cotton, which once harvested can be used for both fiber and food (in the form of cotton oil), must have a tolerance established and be labeled for food use even though the particular cotton crop to which it is applied in the field may not ultimately be used as food.

- (9) Depending on how it is processed and sold after harvest, cannabis may be consumed through inhalation (smoking), ingestion (eating) and through dermal exposures (creams and lotions applied topically). Due to the lack of specific risk assessments or tolerances for use of any pesticides specifically on cannabis CDA, in accordance with the CFDA, has determined that it is unsafe to apply any pesticide to cannabis that requires a tolerance for applications to raw commodities or that is not approved for use on tobacco.

The heightened safety concern created by the multiple ways in which cannabis is consumed was highlighted recently by the marijuana industry’s widespread use of a product called Eagle 20 which contains the active ingredient myclobutanil. In a May 2015 lawsuit against the City of Denver and CDA challenging the City’s hold orders preventing the sale of marijuana on which myclobutanil was found, a marijuana grower argued that myclobutanil was safe to ingest and smoke. Because no risk assessments had been conducted specifically for the use of myclobutanil on marijuana and no tolerances for such use were established, the City and CDA argued that it was unsafe to use myclobutanil on marijuana. Although the judge ruled in the City’s and CDA’s favor and sustained the hold orders, based on the scientific information available at that time and presented to the court, the judge stated in his ruling that, “The evidence at the hearing strongly suggests that myclobutanil is likely safe for use on marijuana and that the levels

of myclobutanil found on the Plaintiff's marijuana would not constitute a health threat to those who ingest it, either through eating or smoking".

Only a month later, in June 2015, Frank Conrad, the Lab Director of Colorado Green Lab, confirmed the City's and CDA's concerns when he analyzed the known chemical and physical properties of myclobutanil and reported in his paper, "Eagle 20 and Myclobutanil in the Context of Cannabis Cultivation and Consumption," that when heated above 205 degrees Celsius (cigarette lighters burn at 450 degrees Celsius) myclobutanil forms hydrogen cyanide (HCN). Conrad's paper points out that HCN is known to cause serious neurological, respiratory, cardiovascular, and thyroid problems and that cannabis retaining even marginal amounts of myclobutanil (ex. 0.03 ppm) could potentially expose consumers to non-lethal, but clinically relevant levels of HCN. This illustrates the potential danger of using a pesticide on cannabis that does not meet the criteria established in these Rules, including tolerance exemption of all active ingredients and EPA approval of use on tobacco (which is consumed through inhalation).

- (10) CDA has identified certain pesticide products whose use on cannabis would not constitute a violation of the label due to the very general use statements on the label. In addition, because the active ingredient(s) of these pesticide products are exempt from a tolerance requirement they in most cases provide for use on crops that may be consumed. However, broad labeling and a tolerance exemption for food use does not necessarily mean the active ingredient was tested or approved for use on products to be smoked, such as tobacco. Since cannabis may also be consumed by smoking, any pesticide product allowed for use on cannabis must also have active ingredients that are approved for use on tobacco to ensure EPA has considered use on commodities intended to be smoked in their risk assessment.
- (11) CDA is proposing that the only pesticides allowed for use on cannabis be those registered with CDA in accordance with Title 35, Article 9, C.R.S. This will prevent the application of "home-made" pesticide concoctions containing active ingredients that may be unknown and could pose a serious health risk to the applicator and end user if consumed. This will also ensure that any pesticide product applied to cannabis has had a risk assessment conducted to determine allowed uses.
- (12) These Rules set forth the specific criteria, which if met, will prevent the use of pesticides for the cultivation of cannabis in an unsafe manner that would violate Sections 35-10-117(1)(i) and (2)(a) C.R.S.. Section 3 registered pesticide products may be used on cannabis if:
 - (a) The active ingredients have been determined to be tolerance exempt from the requirements of a tolerance, as established under 40 C.F.R. Part 180, Subparts D and E. EPA has established in the risk assessment process that these products are of lowest toxicity and therefore do not require tolerances to be established for use on raw commodities.
 - (b) The label has broad language that allows the use of the pesticide on the site of application. The term "site" includes all sites of application, including interior, exterior sites, structures in which application may be made, as well as the actual plant or crop.
 - (c) The pesticide product label expressly allows use on crops intended for human consumption. This is intended to prevent the use of pesticides on cannabis that although broadly labeled, are not tested or intended for use on food crops.
 - (d) The pesticide's active ingredients must be allowed by EPA for use on tobacco. Pesticide products may contain active ingredients that have had risk

assessments conducted for consumption in food, but those active ingredients may not have been tested or intended to be burned and inhaled. Requiring that all active ingredients in pesticides used on cannabis have EPA-allowed uses on tobacco, will ensure that EPA has considered this in their risk assessment process.

- (e) Some pesticide products may meet all of the required criteria except being expressly labeled for food use due to marketing toward other markets. Nevertheless, if CDA can verify with the manufacturer that the product's master label allows food uses and that all of the active and inert ingredients are allowed for use on food crops and tobacco, CDA through this Rule will have the authority to allow the product's use on cannabis.
- (13) Under the authority of Section 24(c) of FIFRA, states may register an additional use of a federally registered pesticide product, or a new end use product, to meet special local needs. EPA reviews these registrations, and may disapprove the state registration if, among other things, the use is not covered by necessary tolerances, or the use has been previously denied, disapproved, suspended or canceled by the Administrator, or voluntarily canceled subsequent to a notice concerning health or environmental concerns.

These Rules will allow the use of pesticide products on cannabis that have gone through the 24(c) registration process. The 24(c) process will require additional data submission specifically to address use on cannabis, including residue studies and considerations for extracts as well as submission of specific use instructions for use on cannabis. EPA will review this information and deny the registration if it does not support the use.

- (14) EPA has determined that certain "minimum risk pesticides," commonly referred to as "25(b) pesticides," pose little to no risk to human health or the environment. EPA has exempted them from the requirement that they be registered under FIFRA. These products must still be registered with CDA and meet minimum FIFRA standards for labeling requirements and claims.

There may be some 25(b) products that the manufacturer did not intend to allow end users to consume. The Rule will only allow the use of 25(b) minimum risk pesticide products on cannabis if the pesticide labeling allows use on crops or plants intended for human consumption.

- (15) The Rules will allow the Commissioner to prohibit the use of any pesticide that he determines could pose a threat to public health and safety or the environment, even if it otherwise meets the Rules' criteria. Pesticide use on cannabis is a newly regulated area of agriculture and new information is coming to light daily. This will give CDA the means to stop the use of any previously approved pesticide when new information or science establishes that such use would be unsafe.
- (16) Applying the criteria in the Rules to the more than 12,000 pesticides currently registered with the State of Colorado, CDA has determined that there are less than two hundred pesticides that can be legally used in the cultivation of cannabis. In order to inform cannabis growers which pesticides are available to them, CDA has created a list of pesticides that can be legally used. This list will be published on CDA's website and updated as needed.
- (17) As a result of SB15-119 the Private Applicator recordkeeping requirement was changed from three years to two years, to match the federal recordkeeping requirement. This change to Rule 6.05 will make the Rule consistent with the PAA.

18.18. Adopted September 20, 2017- Effective November 30, 2017

Statutory Authority

The amendments to these Rules are proposed for adoption by the Commissioner of the Colorado Department of Agriculture ("CDA") pursuant to his authority under the Pesticide Applicators' Act (the "Act"), §§ 35-10-118(2)(a) and (b), C.R.S.

Purpose

The purpose of these Rules is to add a new Post Harvest Potato Pest Control category; amend the criteria for determining which pesticides may be used in the cultivation of Cannabis to allow for the use of unregistered pesticides during research and demonstration activities only; to update commercial applicator storage signage requirements; and to make conforming changes to clarify existing Rules. Specifically, these Rules:

1. Correct typographical errors and references.
2. Amend Rules 5.25, 5.26, 5.27, 5.28 and 10.03 to add the new Post Harvest Potato Pest Control category.
3. Amend 8.01(g) to make the "turf" reference consistent throughout this Part 8.
4. Amend Rule 11.05 to provide a more flexible manner in which commercial applicators must post signs notifying employees, first responders, and other parties of the presence of pesticides in pesticide storage areas.
5. Amend Rule 17.03 to allow the use of unregistered pesticides in the cultivation of Cannabis for research and demonstration purposes only.

Factual and Policy Issues

1. Clarify which part of Rule 5.01 outlines the required training and experience to meet the qualifications of a New Hire Experienced Technician.
2. On December 30, 2015, a new licensure category, the Post-Harvest Potato Pest Control category (i.e., Category 308), was created. Prior to the creation of this licensure category, post-harvest potato pest control pesticide applications were performed under the Stored Commodities Treatment category (i.e., Category 305). Rules 5.25, 5.26, 5.27, 5.28 and 10.03 outline the technician training requirements and experience required to obtain a Qualified Supervisor's license in the Stored Commodities Treatment category. To address the technician training and licensure experience requirements for the Post-Harvest Potato Pest Control category, the Department proposes to update Rules 5.25, 5.26, 5.27, 5.28 and 10.03 to add the Post-Harvest Potato Pest Control category so that the training and experience requirements are the same for this category as for its parent category.
3. The Turf Pest Control category and the Ornamental Pest Control category fall under the broad definition of "ornamental" applications. The Rangeland Pest Control category defines sites of applications for this licensure category and requirements that applicators who make applications in a forested area that is within fifty feet of a residence or commercial structure also comply with the posting and notification requirements in the Turf Pest Control category. Rule 8.01(g) currently references the Turf Pest Control requirement and uses the general "ornamental" term. To clarify the rule requirement, the Department proposes to reference the Turf Pest Control category throughout.

4. Rule 11.05 sets forth that warning signs are required for pesticide storage areas or entrances thereto. The current Rule has specific verbiage which pesticide storage signs must meet. When this Rule was originally created, applicators could purchase signs with this exact verbiage. However, pesticide storage signs currently available for sale no longer contain the required language in the PAA. Because the Rule states that pesticide storage signs “shall” be marked with the specific verbiage used in the Rule, companies must now create their own pesticide storage signs to be in compliance with the Rule. The Department wants to amend Rule 11.05 to permit the use of other types of standardized pesticide storage signage, while maintaining the emergency contact information requirement and storage marking provisions already contained in the Rule, as well as requiring that any applicator who obtains a waiver of this sign requirement from a local fire department maintain a copy of that waiver in the applicator’s files for Department review.
5. On March 30, 2016, the Department passed Rules that outlined the criteria for which pesticides may be applied in the cultivation of Cannabis. Specifically, Rule 17.03 limited the use of pesticides in the cultivation of Cannabis to registered pesticides only. In May 2017, HB 1367 was passed to allow marijuana cultivators and other persons to conduct research and demonstration activities related to pesticide use on marijuana. Research and demonstration activities are for the purpose of developing data on currently unregistered pesticides or pesticides that are not registered for a specific use. The Department proposes to amend Rule 17.03 to allow the use of unregistered pesticides in the cultivation of Cannabis for research and demonstration purposes in accordance with the intent of HB 1367 and 40 CFR Part 172.

18.19. Adopted February 22, 2018 – Effective April 15, 2018

The amendments to these Rules are proposed for adoption by the Commissioner of the Colorado Department of Agriculture (“CDA”) pursuant to his authority under the Pesticide Applicators’ Act (the “Act”), §§ 35-10-118(2)(a) and (b), C.R.S.

Purpose

The purpose of these Rules is to incorporate federal statutory provisions by reference pursuant to § 24-4-103(12.5)(a), C.R.S. Specifically, these Rules:

1. Amend the title to Part 1 of the Rule to include “Incorporations by Reference.”
2. Amend Part 1 by adding a new Rule 1.03 to address the incorporation by reference provisions.
3. Amend Rules 2.28, 6.05, 11.08, 17.03, 17.04(a)(1), 17.04(b)(1), and 17.04(d) by updating the references to the Code of Federal Regulations (“C.F.R.”) to include the date of the effective edition and by removing repetitive incorporation statements.

Factual and Policy Issues

The factual and policy issues encountered when developing these Rules include:

1. On September 20, 2017, the Commissioner of Agriculture adopted Rules to allow Research and Demonstration uses of unregistered pesticides for the cultivation of Cannabis. In this Rule the Department referenced the C.F.R.
2. On November 6, 2017, the Department was notified by the Office of Legislative Legal Services that the Department’s C.F.R. references incorporated into Rule did not comply with the requirements of § 24-4-103(12.5)(a), C.R.S.

3. The proposed Rule changes amend the title of Part 1 to add "Incorporations by Reference" and add a new Rule 1.03 to meet required provisions to incorporate by reference set forth in § 24-4-103 (12.5)(a), C.R.S.
4. Rules 2.28, 6.05, 11.08, 17.03, 17.04(a)(1), 17.04(b)(1), and 17.04(d) are amended to update the C.F.R. edition date to meet required provisions of incorporation by reference as set forth in § 24-4-103 (12.5)(a), C.R.S.
5. Rule 11.08 was amended to remove the existing incorporation language that is now redundant to Rule 1.03.

18.20. Adopted November 15, 2019 – Effective December 30, 2019

Statutory Authority

These amendments to these rules are proposed for adoption by the Commissioner of the Colorado Department of Agriculture ("CDA") pursuant to her authority under the Pesticide Applicators' Act ("Act"), specifically §§ 35-10-118(2)(b).

Purpose

The purpose of these proposed amendments is to:

Amend Part 1 and Part 10 of the Rules Pertaining to the Administration and Enforcement of the Pesticide Applicators' Act (the "Rule") to address new landlord and tenant bed bug reporting requirements created by House Bill 19-1328.

Factual and Policy Issues

The factual and policy issues encountered when developing these rules include:

1. Pursuant to section 35-10-118(2)(b), C.R.S., the commissioner is authorized to adopt all reasonable rules for the administration and enforcement of this article, including, but not limited to: the establishment of qualifications for any applicant and standards of practice for any of the licenses authorized under this article.
2. During the 2019 legislative session, the Colorado General Assembly adopted HB 19-1328, effective January 1, 2020. HB 19-1328 amended Title 38, Article 12, Tenants and Landlords, concerning bed bugs in residential premises and established a requirement for commercial pesticide applicators to notify landlords and tenants of bed bug activity and provide remediation instructions.
3. Notification provisions created in HB 19-1328 expressly state that notification and reporting will be in accordance with rules established by the commissioner pursuant to Title 35, Article 10.
4. Part 1, Definitions; of the Rules associated with the Act is amended to add definitions established in HB 19-1328 to include "Contiguous Dwelling Unit," "Dwelling Unit," "Landlord," and "Tenant" to ensure clarity in the new rules established in Part 10.
5. Part 10, Structural Applicators; of the Rules associated with the Act is amended to add new Parts 10.08(a) and (b) to establish what bed bug activity must be reported to the landlord and what remediation recommendations must be provided to the tenant.
6. A new Part 10.08(c) is created to require that the structural applicator who makes the report to a landlord retain a record of the report for three years.

18.21. Adopted December 8, 2021 – Effective January 30, 2022

Statutory Authority

The amendments to these Rules are proposed for adoption by the Commissioner of the Colorado Department of Agriculture (“Department”) pursuant to the Commissioner’s authority under the Pesticide Applicators’ Act (the “Act”), §§ 35-10-118(2)(a), (b), (c), (d), (3)(a), (4), (5) and (9) C.R.S.

Purpose

The purpose of these Rules is to incorporate new federal certification and training requirements pursuant to 40 C.F.R. Part 171 and to clarify existing Rule requirements. Specifically, the revisions to the Rules:

1. Update Part 1.02(j) to reflect that Article 36 of Title 12, C.R.S., was renumbered in 2019 and now exists at Article 240;
2. Amend Part 1.03 to incorporate by reference additional provisions from the Code of Federal Regulations;
3. Repeal Parts 2.05.5 and 2.38 consistent with Senate Bill 21-077 (Remove Lawful Presence Verification Credentialing);
4. Amend Parts 2.09 and 2.11 to clarify how applicants provide insurance information to the Department;
5. Create Parts 2.12(c) and (d) and 2.30(c) and (d) to clarify the meaning of adequate supervision by qualified supervisors;
6. Amend Part 2.34 and 2.50 to clarify qualified supervisor/certified operator and private applicator application requirements, respectively, including information on the age and date of birth of the applicant;
7. Amend Part 2.40 to clarify that qualified supervisors may only provide supervision in the licensure category or categories that he or she holds;
8. Amend Part 3.01 to adopt certification standards that meet or exceed federal standards for commercial and private applicators;
9. Amend Parts 4.01, 4.02, 4.04, 4.07 and 4.09 to clarify and update the process for submission of continuing education courses to the Department in a manner that meets federal recertification requirements in 40 C.F.R. § 171.107(b)(2)(iii);
10. Amend Parts 4.05 and 4.10 to clarify the requirements for approval or denial of continuing education courses;
11. Amend Part 5.02(h) to clarify that all training records must be recorded on forms provided by the Department and that those forms must be completed in full in order for a commercial, registered limited commercial, or registered public applicator to comply with the Department’s Rules;
12. Create Part 5.02(k) to comport certification and training requirements for technicians with new federal requirements at 40 C.F.R. § 171.201(d);
13. Create Part 5.02(l) requiring licensed or registered applicators to obtain training records for certain new technicians when those new technicians are hired and to maintain those records consistent with the Rules;

14. Create Part 5.02(m) establishing record retention and record sharing requirements, as well as identifying the records to which those requirements apply;
15. Amend Part 6.03(j) to include the license number as information that must be included on application records;
16. Create Part 7.01(a) to define the term “company business name” as that term appears in Parts 7.01(b) and (c);
17. Create Parts 8.03(f) and 9.04(e) to cross-reference notification and signage requirements appearing in Parts 12 and 13 of the Rules;
18. Amend Part 9.01(a) to clarify sites of application allowed under Category 206, Turf Pest Control;
19. Update Part 13.01 to cross-reference statutory requirements for notification at § 35-10-112(c), C.R.S.;
20. Update Part 13.02 to clarify that signage height requirements do not apply to notices required to be placed in a golf course clubhouses;
21. Update Part 13.04 to clarify notice requirements for gold course clubhouses;
22. Create Part 15.02(c) to adopt private applicator supervision standards that meet or exceed federal standards;
23. Amend Part 17.03 to clarify when existing stocks of certain pesticide products may be used after the product becomes unregistered;
24. Amend Part 17.04 to clarify that no person may use pesticide products on Cannabis if those pesticide products do not meet the conditions specified in Rule; and
25. Correct non-substantive typographical, formatting, and grammatical errors throughout the Rules.

Factual and Policy Issues

The factual and policy issues encountered when developing these Rules include:

1. Article 36 of Title 12, C.R.S., was renumbered in 2019 and now exists at Article 240. Part 1.02(j) was updated to reflect the correct statutory provision
2. When an agency incorporates material by reference in its Rules, it must comply with § 24-4-103(12.5)(a), C.R.S. Various edits to these Rules reflect those requirements.
3. On May 27, 2021, Governor Jared Polis signed Senate Bill 21-077 into law. SB21-077 repealed requirements at § 24-34-107, C.R.S., that required individuals applying for licenses with the Department to provide evidence of lawful presence in the United States. As a result, the Department is repealing Parts 2.05.5 and 2.38 concerning the requirement to establish lawful presence as a condition of licensure.
4. Parts 2.09 and 2.11 concern requirements that applicants for licensure provide proof of insurance on a form provided by the Commissioner. However, over the past decade, insurance providers have expressed concern over the language in the Department’s form. This causes delay in processing applications. The Department is aware that the information it requests is often covered by industry forms, such as the ACORD form. Therefore, the Department is revising Parts

- 2.09 and 2.11 to provide flexibility to applicants and to allow the Department to accept standard forms, including the ACORD form, issued by insurance carriers.
5. Part 2.12 of the Rules, concerning adequate supervision of technicians by a qualified supervisor, was last reviewed in 2008. Since then, the pesticide applicator industry has evolved, such that a qualified supervisor is often employed by more than one commercial applicator business. This has caused confusion in the industry concerning the number of technicians that can be supervised by one qualified supervisor, especially when that qualified supervisor is linked to multiple commercial applicator businesses. The new Parts 2.12(c) and (d) clarify and confirm that a qualified supervisor may supervise one or more technicians employed by multiple commercial applicator businesses, so long as the aggregate number of technicians supervised never exceeds 15 at any one time.
 6. On January 4, 2017, the U.S. Environmental Protection Agency published revised certification standards for pesticide applicators (82 Fed. Reg. 952), which standards became effective on March 6, 2017. To comply with these new federal standards, the Department must promulgate and revise its rules pertaining to certification and training of pesticide applicators consistent with the revised State Certification Plan submitted to EPA on March 6, 2020. Therefore, the Department is revising Parts 2.34 and 2.50 of the Rules to reflect requirements in 40 C.F.R. §§ 171.103(a)(1) and 171.105(g), specifically adopting a minimum age requirement for commercial and private applicator certification of at least 18 years old.
 7. Over the past few years, there has been some confusion surrounding the types of activity that a qualified supervisor may supervise. Therefore, the Department is revising Part 2.40 to make clear that a qualified supervisor is only responsible for (and can only provide) supervision in the specific categories of licensure that he or she holds.
 8. As described above, EPA revised its federal standards for the certification and training of licensed pesticide applicators in 2017. States must adopt certification standards that meet or exceed these federal standards. Therefore, the Department is amending Part 3.01 to require compliance with federal certification standards set forth in 40 C.F.R. §§ 171.103 and 105 for commercial and private applicators.
 9. Colorado must also meet federal continuing education requirements at 40 C.F.R. §§ 171.107(b)(2)(i) – (iii) when approving, verifying the content of, and confirming an applicator's attendance at continuing education courses (each a "CEC"). EPA updated these requirements in 2017, and the Department is updating Parts 4.02, 4.04, 4.05, 4.07, 4.09, and 4.10 accordingly. The Department is also providing clarification on the timing and process for a course sponsor to seek approval for CECs. Specifically:
 - a. Revisions to Parts 4.02(b) and 4.07(b) clarify that requests for approval must be submitted on a form provided by the Commissioner;
 - b. Revisions to Parts 4.02(c) and 4.07(c) increase the number of days required to submit CECs to the Department for approval, allowing the Department sufficient time to review and respond to the increasing number and complexity of CEC approval requests that it receives;
 - c. Revisions to Part 4.02(d) and 4.07(d) provide clarity on what information must be provided to the Department to ensure that the content and quality of each proposed session complies with the Rules;
 - d. A new Part 4.02(e) and Part 4.07(e) confirm the session length(s) required to comply with the Rules;

- e. A new Part 4.02(f) and Part 4.07(f) require that, subject to space availability, all courses must be open to all Colorado licensees. These revisions codify long-standing Department policy intended to ensure equitable CEC opportunities for all Colorado licensees. These revisions promote access to and availability of CEC courses to persons who must attend such courses in order to maintain and/or renew their respective licensure or registration status.;
 - f. Revisions to Part 4.04 and Part 4.09 describe the method by which a course sponsor must provide attendance confirmation to each attendee and the manner in which course sponsors verify course attendance for each attendee with the Commissioner; and
 - g. Revisions to Part 4.05 and 4.10 clarify when the Department may deny a CEC request.
10. As described above, EPA updated its standards in 2017 for training of applicators and for documenting that training, requiring that commercial applicators maintain, provide upon request, and verify training documentation for noncertified applicators and their qualifications. As such, consistent with 40 C.F.R. §§ 171.201(d) and 171.303(b)(7)(vi), the Department is adding the following Parts to the Rules:
- a. Part 5.02(h) to require that training be documented on a form provided by the Commissioner;
 - b. Part 5.02(k), which requires that all noncertified applicator training meets all provisions set forth in 40 C.F.R. § 171.201(d), which specifies subject matter that must be covered;
 - c. Part 5.02(l), which requires that an employer must obtain training records for a new hire experienced technician to ensure that the new hire experienced technician has met all of the training requirements established in the Rules; and
 - d. Part 5.02(m), which defines the records that make up a technician's training record, sets training record retention periods, and establishes a requirement that records be made available to the technician or the Commissioner upon request.
11. EPA also establishes recordkeeping requirements for commercial, registered limited commercial, and registered public applicators. In 2017, EPA updated the relevant standards at 40 C.F.R. § 171.303(b)(7)(vi)(I). Therefore, the Department is updating Part 6.03(j) accordingly, now requiring that commercial applicators record the name and certification number of those making or supervising pesticide applications.
12. Recently, the Department learned that commercial applicators and private applicators interpreted the term "company business name" in multiple ways when complying with Part 7.01 (Equipment Identification), sometimes including names or visual representations on equipment that differed from the name provided to the Department originally. Because the term "company business name" is not defined in Part 7.01, ambiguity exists with respect to whether the vehicle identification must be the company's legal name, a trade name, a company logo, etc. Therefore, the Department is adding Part 7.01(a) to define the term "company business name" to include any name or trade name or trademark registered with the Colorado Secretary of State, any doing business as name as submitted in the licensee's application, and any company logo that clearly communicates the licensee's business name.
13. The Department's Rules include requirements for notifying persons of pesticide applications in Part 12 and for posting specific signage with information on the pesticide application in Part 13. Because notification requirements are also referenced in Articles 8 and 9, and to ensure that the other notification and signage requirements in Rule are not overlooked, the Department is adding

- Parts 8.03(f) and 9.04(e) to cross-reference notification and signage requirements in Parts 12 and 13.
14. In 2010, the Department revised Part 8.01(i) concerning Category 109 to specify permitted sites of application within the Industrial and Right-of-Way Weed Control category. These sites included sidewalks, trails, paths, parking lots, and certain paved areas. This created confusion in the regulated community concerning whether Category 109 also covered areas that were abutted by or surrounded by turf because turf is covered under Category 206. Therefore, the Department is revising Part 9.01(a), Turf Pest Control, to provide additional clarity on what sites of application are allowed under Category 206 as compared with Category 109. Specifically, the Department is expanding Category 206 to allow application on certain managed turf, ornamental beds, xeriscaped areas, and sidewalks, driveways, etc. not located in a zoned right-of-way (which would fall under Category 109).
 15. Part 13, Notification of Pesticide Applications, outlines specific flagging requirements for turf and ornamental applications. To provide additional clarification, the Department is proposing an amendment to Part 13.01 to add a reference to notification flags specified in statute.
 16. Part 13, Notification of Pesticide Applications, outlines specific flagging requirements for turf and ornamental applications. Part 13.02 generally describes the required height of signs, but separate requirements exist for golf course clubhouses. To address this confusion, the Department is amending Part 13.02 to clarify that the height requirements do not apply when posting in golf course clubhouses and amending Part 13.04 to clarify signs posted at golf course clubhouses must be placed in a manner that is conspicuous and easily legible to those entering treated areas.
 17. In 2017, EPA revised its requirements at 40 C.F.R. §§ 171.201(2)(iii)(A)(B) and (C) related to the supervision of restricted use pesticide applications made by private applicators who are 16 years of age. Accordingly, the Department has created Part 15.02(c) to identify under what circumstances a 16-year-old unlicensed technician may apply a restricted-use pesticide. The Department uses the term “unlicensed technician” to refer to “non-certified technicians” or “non-certified applicators,” these latter two terms reflecting the terminology used by EPA in the Code of Federal Regulations. The Department uses these three terms interchangeably in these Rules.
 18. On March 30, 2016, the Department adopted Rules to outline the criteria for which pesticides were allowed for use in Cannabis cultivation. Part 17.03 requires that only registered pesticides be allowed for use in the cultivation of cannabis. However, Part 17.03 does not account for existing stocks policies at the state and federal level that allow for the limited use of existing stocks after a product becomes unregistered (absent a finding that the product poses a significant threat to public health and safety or the environment, in which case existing stocks cannot be used). Therefore, the Department is amending Part 17.03 to allow for the use during the subsequent registration year of an unregistered pesticide product that appeared on the Department’s list of pesticides allowed for use on Cannabis at the time of purchase, but was not re-registered with the Department for the subsequent registration year. This change will allow end users to use any remaining unregistered pesticide product, but only during the registration year following the manufacturer’s failure to renew the registration. This limited ability to use remaining stocks of an unregistered product does not extend to products that the Department has determined pose a significant threat to public health and safety or the environment.
 19. The Department is also amending Part 17.04 to clarify that certain uses of pesticide products on cannabis are considered unlawful acts. Specifically, the Department is clarifying that it is unlawful for a person to use a registered pesticide in the production of cannabis when that product does not meet the criteria set forth in Rule – namely, the pesticide must meet all requirements of Part 17.04(a)(1) – (4), Part 17.04(b)(1) – (3), Part 17.04(d), or Part 17.04(e).

18.22. Adopted November 8, 2023 – Effective December 30, 2023

Statutory Authority

The amendments to these Rules are proposed for adoption by the Commissioner of the Colorado Department of Agriculture ("Department") pursuant to the Commissioner's authority under the Pesticide Applicators' Act (the "Act"), §§ 35-10-112(1)(e) and (f), C.R.S., and §§ 35-10-118(2)(a) – (d), (3)(a) – (c), (4), (5) and (9), C.R.S.

Purpose

The purpose of these Rules is to incorporate new federal certification and training requirements pursuant to 40 C.F.R. Part 171, to update the Rules consistent with requirements in Senate Bill 23-192 ("SB23-192"), and to clarify existing Rule requirements. Specifically, the revisions to the Rules:

1. Amend Part 1.02(a) to use the same definition of "alley" as is found in § 42-1-102(3), C.R.S., and to align the meaning of "vehicle" with § 42-1-102(112), C.R.S.
2. Amend Part 1.02(o) to cross-reference the definition of "use" found in Title 35, Article 10, of the Colorado Revised Statutes.
3. Amend Part 1.03 to update materials incorporated by reference.
4. Amend Part 2.54 to match private applicator supervision and training requirements established in federal law.
5. Create a new Part 2.61(a) to establish and require licensure for private applicators in a new Aerial Pest Control licensure category as required by federal law.
6. Create a new Part 2.61(b) to establish and require licensure for private applicators in a new Soil / Non-Soil Fumigation Pest Control licensure category as required by federal law.
7. Amend Parts 4.11, 4.32, and 4.38 to add new continuing education subject matter requirements established in federal law.
8. Amend Part 5.02(c) and (k) to match and correctly refer to technician training and supervision requirements established in federal law.
9. Amend Part 8.01(d) to match language used in federal law.
10. Amend Part 8.01(j) and create a new Part 8.01(j)(1) to match the federal Public Health Pest Control category and to create a new "Government-Sponsored Public Health Pest Control" category.
11. Create a new Part 8.01(l) to establish and require licensure for commercial agricultural applicators in a new Aerial Pest Control licensure category as required by federal law.
12. Create a new 8.01(m) to establish and require licensure for commercial agricultural applicators in a new Soil / Non-Soil Fumigation Pest Control licensure category as required by federal law.
13. Amend Part 9.04(b) to clarify when and what notice of application must be provided for commercial properties or other sites managed or owned by an off-site organization or entity where an owner or agent of the site is not present at the time of application.
14. Amend Part 10.01(c) to align the Structural Fumigation licensure category with new federal requirements.

15. Amend Part 10.01(h) to remove language that is no longer applicable to the Post-Harvest Potato Pest Control licensure category.
16. Create a new 10.01(i) to establish and require licensure for commercial structural applicators in a new Soil / Non-Soil Fumigation Pest Control licensure category as required by federal law.
17. Amend Part 12.01 to clarify that the pesticide-sensitive registry application and medical justification must be for the person who will be listed on the registry.
18. Amend Part 12.02 to add addresses for principal place of employment, school, or both in accordance with new SB23-192 requirements and creates the definition of school this Part pertains to.
19. Amend Part 12.06 to clarify applicability and content of notice requirements for turf or ornamental pesticide applications for persons whose names appear on the pesticide-sensitive registry.
20. Amend Part 12.07 to clarify notice requirements for turf or ornamental pesticide applications and to include an electronic notification provision in accordance with SB23-192.
21. Create a new Part 12.08 to address other notice requirements in SB23-192 concerning turf or ornamental pesticide applications performed on a property that abuts or is entirely located within two-hundred and fifty feet of a pesticide-sensitive person's listed principal residential address, provided the residential address appears in a database to be developed by the Department.
22. Amend Part 12.10 to clarify notice requirements for structural pesticide applications and to include an electronic notification provision for such applications.
23. Amend Part 15.02 to clarify supervision requirements established in federal law.
24. Correct non-substantive typographical, formatting, grammatical, and citation errors throughout the Rules.

Factual and Policy Issues

The factual and policy issues encountered when developing these Rules include:

1. The Department learned from stakeholders that the definition of "alley" in Part 1.02(a) is confusing in relation to abutting properties. The Department is updating the definition of "alley" to repeat the definition used in § 42-1-102(3), C.R.S., to clarify that an "alley" is not intended for through vehicular traffic by "vehicles" as that term is defined at § 42-1-102(112), C.R.S., and so would not include a bike path or trail.
2. In the 2023 legislative session, SB23-192 updated the definition of "use" (as in to "use" a pesticide) to meet the new federal definition of "use" established in 40 C.F.R. Part 171 in 2017. Part 1.02(o) now cross-references the new definition of "use" at § 35-10-103(18), C.R.S.
3. As a result of new federal certification and training requirements in 40 C.F.R. §§ 171.201(b) – (d), Part 2.54 is being amended to address new supervision requirements for private applicators that require "on-site" supervision for any use of a restricted use pesticide by an unlicensed individual, including specific training, qualifications, and use-specific conditions that must be met prior to the use of any restricted use pesticide by that unlicensed individual.
4. As a result of new federal certification requirements established in 40 C.F.R. Part 171 (2017), applicators must now hold, in addition to their primary licensure category, a new federal Aerial Pest Control category for any application(s) made aurally. A new Part 2.61(a) for private

applicators and a new Part 8.01(l) for agricultural applicators has been created to establish the licensure category and the licensure requirement for aerial applications. The revisions provide for obtaining the new category by examination offered by the Department or other state lead agencies within the last 12 months, through reciprocal licensure, or through renewal of the category by obtaining continuing education credit.

5. As a result of new federal certification requirements established in 40 C.F.R. Part 171 (2017), applicators must now hold, in addition to their primary licensure category, a new federal Soil/Non-Soil Fumigation category for any application of a fumigant not made to a structure. A new Part 2.61(b) for private applicators, a new Part 8.01(m) for agricultural applicators, and a new 10.01(i) for structural applicators has been created to establish the licensure category and the licensure requirement for soil / non-soil fumigant applications. The revisions provide for obtaining the new category by examination offered by the Department within the last 12 months, through reciprocal licensure, or through renewal of the category by obtaining continuing education credit. Because soil and non-soil fumigation requirements change from state-to-state, the Department will not allow a person to obtain this licensure category by examination offered in another state.
6. The revised federal certification requirements also established additional core educational subject matter elements necessary for an applicator to obtain continuing education credit. Parts 4.11, 4.32, 4.38 have been amended to add these new elements.
7. The revised federal certification requirements now require that commercial applicator technicians must be fully trained prior to the use of an restricted use pesticide and that all supervision, training, qualification, and use-specific conditions at 40 C.F.R. §§ 171.201 must be met. Parts 5.02(c) and (k) have been amended to accurately reference these requirements.
8. Federal certification licensure categories were updated in 40 C.F.R. Part 171 (2017), and the language of Part 8.01(d) has been revised to match the federal Seed Treatment licensure category.
9. Federal certification licensure categories were updated in 40 C.F.R. Part 171 (2017). EPA updated the federal public health pest control category, requiring that the category address the use of restricted use pesticides in government-sponsored public health programs. Because this category no longer addresses general use pesticide applications for public health applications made for non-governmental persons or entities (which covers the majority of public health pest control applications in Colorado), the Department created a separate category for non-government commercial applicators who use pesticides for the management and control of pests having public health importance. The proposed amendment to Part 8.01(j) clarifies Colorado's existing public health category for the use of general use pesticides for non-governmental public health pest control applications and adds a new 8.01(j)(1), "Government Sponsored Public Health Pest Control", to meet the federal certification category.
10. The Department learned that Part 9.04(b) required clarification because the term "commercial" was not broad enough to cover the universe of applications contemplated in Part 9.04(b). The existing language had been specific to applications made to commercial properties, but it did not clearly address other sites that may not be considered "commercial" or zoned "commercial." Part 9.04(b) has been amended to address those sites, including greenbelts or open space areas managed by off-site organizations or entities where an owner of the site or an agent of an owner of the site is not present at the site.
11. As a result of new federal certification requirements established in 40 C.F.R. Part 171 (2017) concerning soil/non-soil fumigation pesticide applications, Colorado needed to differentiate its existing fumigation category from the new federal category. Therefore, the Department has amended Part 10.01(c) to specifically reference "Structural Fumigation"; define applicable structural sites of application; and ensure that applicators know that category 303, Structural

- Fumigation, must be held for the application of a fumigant when made to any structure, regardless of the pest being controlled or other licensure category(ies) held by the applicator.
12. Because Part 10.01(h) included language concerning the Post-Harvest Potato Pest Control licensure category that is now obsolete, the Department has removed that language.
 13. Part 12.01 establishes the requirement for a pesticide-sensitive person to submit an application to be placed on the pesticide-sensitive registry. Part 12.01 is being amended to clarify that the application and medical justification submitted must be for the person intended to be listed on the registry.
 14. As a result of SB23-192, pesticide-sensitive persons may list their principal place of employment, principal school address, or both as an address or addresses requiring notification of turf or ornamental applications made at those sites. Part 12.02 has been amended to account for this statutory change and adds the definition of schools this Part pertains to.
 15. Part 12.06 specifies what notification information must be provided to a pesticide-sensitive person whose name is on the pesticide-sensitive registry and clarifies that such notice must be provided when a commercial applicator makes a turf or ornamental application to a property that abuts the pesticide-sensitive person's principal residential address and, if provided to the Department, to that person's principal place of employment, school, or both.
 16. SB23-192 provided for the electronic notification of pesticide applications to pesticide-sensitive persons. To clarify underlying notice requirements, the Department has amended Parts 12.07(a) (concerning turf or ornamental applications) and 12.10(a) (concerning structural applications). To further clarify the circumstances and manner in which electronic notice is given to pesticide-sensitive persons whose names appear on the pesticide-sensitive registry, the Department has added Parts 12.07(b) and 12.10(b), which describe that only one attempt at electronic notification is required; a record of the attempt must be maintained in the applicator's records in order to avoid triggering non-electronic notification requirements; and any changes to the date, time, or location of application require an additional electronic notification to be made no less than 24 hours prior to the application.
 17. SB23-192 required that, on or before July 1, 2024, the Department develop a searchable database of all properties that abut or are entirely located within two hundred and fifty feet of any residential address listed on the pesticide-sensitive registry. SB23-192 also required that, once that database was created, the Department adopt rules requiring that applicators provide notice of applications made to a property that is listed in the database as abutting, or being entirely located within two hundred and fifty feet of, the pesticide sensitive-person's listed residential address, which address must be the person's principal residential address in accordance with § 35-10-112(1)(c)(I)(A), C.R.S. A new Part 12.08 has been created to address these new requirements, effective July 1, 2024.
 18. As a result of new federal certification and training requirements in 40 C.F.R. Part 171 (2017), Part 15.02 is being amended to clarify new supervision requirements for private applicators and commercial applicators that now require "on-site" supervision for any use of a restricted use pesticide.

18.23. Adopted March 20, 2024 – Effective May 15, 2024

Statutory Authority

The amendments to these Rules are proposed for adoption by the Commissioner of the Colorado Department of Agriculture ("Department") pursuant to the Commissioner's authority under the Pesticide Applicators' Act (the "Act"), §§ 35-10-118(2)(a) – (d), (3)(a) – (c), (4), (5) and (9), C.R.S.

Purpose

The purpose of these Rules is to further clarify new federal certification categories pursuant to 40 C.F.R. Part 171. Specifically, the revisions to the Rules:

- 1) Amend Part 2.61(b), 8.01(m) and 10.01(i) to separate the 309 Soil / Non-soil fumigation category into subcategories that specifically address soil and non-soil fumigation applications.
- 2) Amend Part 8.01(l)(1) to remove the word "agricultural" from the category 114, Aerial Pest Control category definition.

Factual and Policy Issues

The factual and policy issues encountered when developing these Rules include:

- 1) In 2023, to comply with federal certification and training requirements, the Department created a new Category 309: Soil / Non-Soil Fumigation Pest Control to address the use of fumigants in relation to all other existing licensure categories.
- 2) At the time the Department promulgated Rules establishing this category, the national soil / non-soil fumigation guide and exam were not available and did not become available until late 2023. By this time, the State of Colorado had already commenced creation of a state-specific examination for licensure in Category 309: Soil / Non-Soil Fumigation Pest Control.
- 3) While developing the state-specific exam for Category 309, the Department learned that, the Category 309 exam covered subject matter that was very specific to soil or non-soil applications. Many test takers would only be making one of these types of applications and therefore the examination may not be representative of the knowledge required to perform those applications. In short, the examination would test for both applications when only one of those applications would ever be made.
- 4) The amendments to the Rules create subcategories in the existing Category 309 to address examination for and certification in two distinct licensure subcategories: Category 309A, concerning the application of fumigants to soil primarily for the purpose of insect, weed and disease control, and Category 309B, concerning applications made to non-soil sites that primarily fall under the structural pest control classification. Category 303: Structural Fumigation Pest Control, will remain unchanged for fumigation applications made in or directly to structures.
- 5) The Department has learned that, although aerial applications have historically only been associated with agricultural applications, other non-agricultural pest management categories are or may utilize aerial application, particularly with unmanned aerial vehicles or UAVs. Therefore, the Department's amendments to the Category 114, Aerial Pest Control, definition remove the "agricultural" pest management designation to clarify the aerial category is required in addition to any pest management category for which the application is made.

Notice of Proposed Rulemaking

Tracking number

2024-00032

Department

1400 - Department of Early Childhood

Agency

1404 - Colorado Universal Preschool Program

CCR number

8 CCR 1404-1

Rule title

UNIVERSAL PRESCHOOL PROGRAM RULES AND REGULATIONS

Rulemaking Hearing

Date

02/22/2024

Time

12:00 PM

Location

Webinar Only: <https://us02web.zoom.us/meeting/register/tZlqc-yspj0uGtT5EP36wKEjltxdR1mb0z3Y>

Subjects and issues involved

The purpose of this rulemaking is for the Executive Director to consider adopting revisions to the Colorado Universal Preschool Program (UPK) Qualifying Factors rules and new UPK Quality Standards. The revisions to the UPK Qualifying Factors rule, update the Federal Poverty Guidelines (FPG) in alignment with recent federal updates; revise the rule language for program clarity; and establish a new qualifying factor that will expand the eligibility for more children to qualify for additional preschool hours, whose family's income is at or below 100% of the FPG. The other major objective for this rulemaking is to establish quality standards that preschool providers must meet to receive UPK funding, as required by section 26.5-4-205(1)(a), C.R.S.

Statutory authority

Sections 26.5-1-105(1), 26.5-4-204(4)(a), 26.5-4-205(1)(a), and 24-4-103, C.R.S.

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COLORADO DEPARTMENT OF EARLY CHILDHOOD

Colorado Universal Preschool Program

UNIVERSAL PRESCHOOL PROGRAM RULES AND REGULATIONS

8 CCR 1404-1

[Editor's Notes follow the text of the rules at the end of this CCR Document.]

4.100 AUTHORITY

These rules and regulations are adopted pursuant to the rulemaking authority provided in sections 26.5-1-105(1) and 26.5-4-204(4), C.R.S., and are intended to be consistent with the requirements of the State Administrative Procedures Act, sections 24-4-101, ~~et seq.~~ through 24-4-204 (the "APA"), C.R.S., the Anna Jo Garcia Haynes Early Childhood Act, sections 26.5-1-101 through 26.5-6-101, ~~et seq.~~ (the "Early Childhood Act"), C.R.S., and the Colorado Universal Preschool Program Act, sections 26.5-4-201, ~~et seq.~~ through 26.5-4-211, C.R.S.

4.101 SCOPE AND PURPOSE

These rules and regulations shall govern the processes, procedures, and requirements of providers and families participating in the Colorado Universal Preschool Program.

4.102 APPLICABILITY

The provisions of these rules and regulations shall be applicable to all preschool providers participating in the Colorado Universal Preschool Program including: family child care homes, as defined in section 26.5-5-303, C.R.S.; child care centers, as defined in section 26.5-5-303, C.R.S.; school districts licensed to operate as a public preschool provider; charter schools licensed to operate as a public preschool provider; or head start programs licensed and regulated by the Colorado Department of Early Childhood.

4.103~~4~~ DEFINITIONS

- A. "Additional preschool services" means hours of preschool services provided to a child in the year preceding enrollment in kindergarten that are in addition to the universal preschool services the child receives.
- B. "Administrative unit" means a school district, a board of cooperative services, a multi-district administrative unit, a charter school network, a charter school collaborative, or the state charter school institute that is providing educational services to exceptional children and that is responsible for the local administration of the education of exceptional children pursuant to article 20 of title 22.
- C. "Administrator" means an employee that oversees program operations, making pedagogical or curricular decisions, or planning for professional development of educators employed by the program, at either the eligible preschool provider or at an entity or organization that exercises control and oversight over the eligible preschool provider, including school districts and boards of cooperative services. The Administrator may or may not be responsible for direct care of children. For purposes of these rules, "administrator" shall include all primary providers of family child care homes, and may include an applicant 2, equally qualified provider, or qualified substitute as defined in rule sections 4.103(D), (T), (HH), and (LL).

- D. “Applicant 2” means an individual that resides in a family child care home and provides care regularly, in a recurring pattern and must have the same required training as the Primary Provider as defined in the “Rules Regulating Family Child Care Homes” located in 8 CCR 1402-1, rule section 2.304(A)(5).
- E. “Child Find” means the program component of IDEA that requires states to find, identify, locate, evaluate, and serve all children with disabilities, from birth to twenty-one (21) years of age. Child Find includes: (a) Part C child find, which is the program component of IDEA that requires states to find, identify, locate, evaluate, and serve children with disabilities from birth through two (2) years of age; and (b) Part B child find, which is the program component of IDEA that requires states to find, identify, locate, evaluate, and serve children with disabilities from three (3) to twenty-one (21) years of age.
- F. “Children with disabilities” has the same meaning as provided in section 22-20-103, C.R.S.
- G. “Classroom” means the educational or instructional location used to support a preschool program by any Preschool Program provider, including schools, child care centers, family child care homes, or other approved Colorado Universal Preschool Program locations.
- H. “Colorado Academic Standards” means the comprehensive set of academic standards across all content areas adopted by the state board of education pursuant to section 22-7-1005, C.R.S.
- I. “Colorado Early Learning and Development Guidelines” means the set of guidelines across all early childhood domains endorsed by the early childhood leadership commission that includes approaches to learning, health and physical development, social and emotional development, language, literacy, numeracy, logic and reasoning, and other subject-specific learning.
- J. “Colorado Universal Preschool Program” or “Preschool Program” means the program established within the department pursuant to section 26.5-4-204, C.R.S., and includes all participating preschool providers.
- K. “Colorado’s Competencies for Early Childhood Educators and Professionals” means the set of content areas, or domains, that describe the knowledge and skills early childhood educators need to work effectively with children, and are updated, maintained, and published by the Department.
- L. “Congregation” means a religious-based convocation, or multiple religious-based convocations, of individuals in a particular geographic area who share a common set of beliefs and who collectively engage in conduct with a direct nexus to that shared common set of beliefs.
- M. “Cooperative preschool provider” means an eligible preschool provider which requires participating families to be meaningfully involved in the operation of the cooperative and which is at least substantially operated, maintained, or administered by participating families.
- N. “Department” means Colorado Department of Early Childhood.
- O. “ECEA” means the “Exceptional Children’s Educational Act”, Article 20 of Title 22, and its implementing rules.
- P. “Early childhood mental health program” means a program which supports the mental wellness of children, or promotes the knowledge, ability, and capacity of individuals who support the mental wellness of children, in order to address and enhance the social, emotional, cognitive, or behavioral developmental needs of children, including children aged birth to six (6).
- Q. “Early learning and assessment approach” means the eligible preschool provider’s chosen methods for selecting, planning, and implementing activities; observing; documenting; and

monitoring designed to support children's learning and development, in alignment with the Colorado Early Learning and Development Guidelines, and includes curricula and other pedagogical methods.

- R. "Eligible child" means a child who is eligible to receive preschool services as provided in section 26.5-4-204(3), C.R.S.
- S. "Eligible preschool provider" means a preschool provider that is actively participating in the Colorado Universal Preschool Program and in good standing with the Department. As used in this context, "good standing" means that the preschool provider has either a permanent, provisional, or probationary license issued by the Department, as those terms are defined and used in 8 CCR 1402-1, rule sections 2.107, 2.108, and 2.109.
- T. "Equally qualified provider" means an employee of a family child care home that has the same required trainings and qualifications as the primary provider as determined in the "Rules Regulating Family Child Care Homes" located in 8 CCR 1402-1, rule section 2.304(A)(29).
- U. "Federal Poverty Level" (FPL) or "Federal Poverty Guidelines" (FPG) refers to figures set by the federal government annually. These figures, based on gross monthly income levels for the corresponding household size, are included in the table in rule section 4.1052(A).
- V. "Foster care home" has the same meaning as provided in section 26-6-903(10), C.R.S.
- W. "Full-day" means thirty to forty (30 to 40) hours of preschool service per week.
- X. "Half-day" means fifteen to twenty (15 to 20) hours of preschool service per week.
- Y. "Head Start program" means a program operated by a local public or private nonprofit agency designated by the federal department of health and human services to operate a head start program pursuant to the provisions of Title V of the federal "Economic Opportunity Act of 1964", as amended.
- Z. "IDEA" means the federal "Individuals with Disabilities Education Act", 20 U.S.C. sections 1400 through 1491, as amended, and its implementing regulations at 34 C.F.R. Parts 300 and 303 (2023), herein incorporated by reference. No later editions or amendments are incorporated. These regulations are available at no cost from the United States Department of Education at www.ecfr.gov. These regulations are available for public inspection and copying at the Colorado Department of Early Childhood, 710 S. Ash St., Denver, CO 80246, during normal business hours.
- AA. "Individualized Education Program" or "IEP" means a written statement for a child with a disability that is developed, reviewed, and revised in accordance with part 1 of article 20 of title 22, C.R.S., and the rules promulgated by the Colorado state board of education~~has the same meaning as provided in section 22-20-103(15), C.R.S.~~
- BB. "Lead teacher" means the employee of an eligible preschool provider that is primarily assigned to a classroom and responsible for delivering instruction or leading activities. A "lead teacher" may include the primary provider, applicant 2, equally qualified provider, and qualified substitute of a family child care home provider.
- CC. "Low-income" means that the child's parent or guardian's gross income must not exceed 270% of the Federal Poverty Guideline (FPG).

- DD. “Multilingual” means a child who is learning two (2) or more languages at the same time, or a child who is learning a second (2nd) language while continuing to develop their first (1st) language.
- EE. “Noncertified kinship care” means a child is being cared for by a relative or kin pursuant to 19-1-103(102), C.R.S., who has a significant relationship with the child in circumstances when there is a safety concern by a county department of human or social services and where the relative or kin has not met the foster care certification requirements for a kinship foster care home or has chosen not to pursue that certification process.
- FF. “Parent” has the same meaning as provided in section 22-20-103, C.R.S.
- GG. “Part-time or slot” means ten (10) hours of preschool service per week.
- HH. “Primary provider” means the person that resides in a family child care home and provides direct care, supervision, and education to child(ren) in care for at least sixty percent (60%) of the daily hours of operation of the family child care home.
- II. “Preschool provider” means any of the following entities that are licensed pursuant to part 3 of article 5 of this title 26.5:
1. A family child care home, as defined in section 26.5-5-303, C.R.S.;
 2. A child care center, as defined in section 26.5-5-303, C.R.S.;
 3. A school district licensed to operate as a public preschool provider;
 4. A charter school licensed to operate as a public preschool provider; or
 5. A head start program.
- JJ. “Provider rate formula” means the formulas for setting the per-child rates for universal preschool services, for preschool services for children with disabilities, for preschool services for eligible children who are three (3) years of age or younger and for additional preschool services.
- KK. “Qualifying factor” means a child or family circumstance, as identified by department rule pursuant to section 26.5-4-204, (4)(a)(II), C.R.S., that may negatively impact a child’s cognitive, academic, social, physical, or behavioral health or development.
- LL. “Qualified substitute” means a substitute provider of a family child care home that has all required trainings and qualifications as determined in the Department’s “Rules Regulating Family Child Care Homes” located in 8 CCR 1402-1 rule section 2.304(A)(71).
- MM. “Resource Bank” means the collection of preschool curricula and other approved educational approaches, toolkits, self-assessments, templates, training, and other resources for use by participating preschool providers that is created, administered, and updated by the Department pursuant to section 26.5-4-205(3), C.R.S.
- NN. “School District” means a school district organized pursuant to article 30 of title 22, C.R.S., that provides preschool services and is licensed pursuant to part 3 of article 5 of title 26.5, C.R.S., as a preschool provider; or a board of cooperative services organized pursuant to article 5 of title 22, C.R.S., that provides preschool services and is licensed pursuant to part 3 of article 5 of title 26.5, C.R.S., as a preschool provider.
- OO. “School year” means the full school year as defined by the local school board of education.

- PP. “Short term basis” means work performed in place of a regular staff member or volunteer who is unable to work their normally scheduled work hours due to a planned or unplanned event that requires the regular staff member or volunteer to be on leave for no more than two (2) calendar weeks.
- QQ. “Sibling” means one (1) or more individuals having one (1) or both parents in common.
- RR. “Staff aide” means an individual who assists the primary provider in a family child care home in the care of children at the family child care home. A staff aide must never be allowed to supervise a child(ren) alone. The primary provider, applicant 2, equally qualified provider, or qualified substitute provider must always be present at all times when the staff aide is providing care for a child(ren).
- SS. “Substitute” means a paid, volunteer, or contract individual of a family child care home responsible for caring for the children in the capacity of the employee, staff aide, or staff member. The primary provider, applicant 2, equally qualified provider, or qualified substitute must always be present at all times when a substitute is providing care for children.
- TT. “Universal preschool services” means ten (10) hours of preschool services per week made available, at no charge, to children in the state during the school year preceding the school year in which a child is eligible to enroll in kindergarten.

4.1040 ~~COLORADO~~ UNIVERSAL PRESCHOOL PROGRAM

The Colorado Universal Preschool Program was established to provide high-quality, voluntary, preschool programming through a mixed delivery system for children throughout the state in the year preceding eligibility for kindergarten enrollment, and to provide for additional preschool services for children who are experiencing poverty, or in low-income families and ~~and~~ who meet the criteria of an identified qualifying factors. The Department intends to work with preschool program services providers to meet families' needs, including for a half- or full-day program.

4.102 ~~PROGRAM PURPOSE~~

- A. For the 2023-24 school year and school years thereafter, families may enroll their children in preschool providers that receive funding through the preschool program. The purposes of the preschool program are:
1. To provide children in Colorado access to voluntary, high-quality, universal preschool services free of charge in the school year before a child is eligible to enroll in kindergarten;
 2. To provide access to additional preschool services in the school year before kindergarten eligibility for children in low-income families and children who lack overall learning readiness due to qualifying factors;
 3. To provide access to preschool services for children who are three (3) years of age, or in limited circumstances younger than three (3) years of age, and are children with disabilities, are in low-income families, or lack overall learning readiness due to qualifying factors; and
 4. To establish quality standards for publicly funded preschool providers that promote children's early learning and development, school readiness, and healthy beginnings.

4.1053 ~~ELIGIBILITY~~ GENERAL CRITERIA FOR PRESCHOOL SERVICES

This rule is promulgated pursuant to section 26.5-4-204(4)(a)(I) and (II), C.R.S.

A. Low-Income Requirements

To be considered low-income for the purposes of this rule section, a child's parent or guardian's gross monthly income must not exceed 270% of the Federal Poverty Guideline (FPG):

FAMILY SIZE	100% FEDERAL POVERTY GUIDELINE (FPG) <u>MONTHLY INCOME</u>	270% FEDERAL POVERTY GUIDELINE (FPG) <u>MONTHLY INCOME</u>
1	\$1,215.00 <u>1,132.50</u>	\$3,280.50 <u>3,057.75</u>
2	\$1,643.33 <u>1,525.83</u>	\$4,437.00 <u>4,119.75</u>
3	\$2,071.67 <u>1,949.17</u>	\$5,593.50 <u>5,181.75</u>
4	\$2,500.00 <u>2,342.50</u>	\$6,750.00 <u>6,243.75</u>
5	\$2,928.33 <u>2,705.83</u>	\$7,906.50 <u>7,305.75</u>
6	\$3,356.67 <u>3,099.17</u>	\$9,063.00 <u>8,367.75</u>
7	\$3,785.00 <u>3,492.50</u>	\$10,219.50 <u>9,429.75</u>
8	\$4,213.33 <u>3,885.83</u>	\$11,376.00 <u>10,491.75</u>
EACH ADDITIONAL PERSON	\$428.33 <u>393.33</u>	\$1,156.60 <u></u>

B. Qualifying Factors

The following qualifying factors will be used to determine a child's eligibility for preschool services pursuant to this rule section~~To be eligible for additional preschool services a child must meet one (1) or more of the following qualifying factors:~~

1. ~~Child is identified as in poverty if the child's parent or guardian's gross income does not exceed 100% of the Federal Poverty Guideline (FPG). Child is identified as low-income in accordance with section (A), above.~~
2. Child is a dual-language learner and the native language spoken in the child's home is a language other than English, or the child's native language is not English.
3. Child has an IEP.
4. Child is currently in the custody of a state supervised and county administered foster care home or in non-certified kinship care.
5. Child is identified as homeless and lacks a fixed, regular, and adequate nighttime residence and at least one (1) of the following:
 - a. Sharing the housing of other persons due to loss of housing;~~;~~ economic hardship, or a similar reason; living in motels, hotels, or camping grounds due to the lack of alternative accommodations; or living in emergency or transitional shelters;
 - b. Has a primary nighttime residence that is a public or private place not designed for or ordinarily used as a regular sleeping accommodation for human beings;
 - c. Living in cars, parks, public spaces, abandoned buildings, substandard housing, bus or train stations, or in similar settings; ~~or;~~

- d. Is a child who is migratory who qualifies as homeless for the purposes of this rule subsection because the child is living in circumstances described in this definition rule subsections (a) through (c), above.

4.106 ELIGIBILITY AND PRESCHOOL SERVICES FOR CHILDREN THREE (3) YEARS OF AGE OR YOUNGER

This rule section is promulgated pursuant to sections 26.5-4-204(3)(a)(II)-(IV) and 26.5-4-208(3)(c)(I) and (II), C.R.S. The Department or Local Coordinating Organization, as applicable, shall distribute funding to school districts and charter schools for preschool services for enrolled children who are three (3) years of age or younger. A school district may utilize the allotted three (3) year old funding, or may distribute all or a portion to a contracted head start agency or community-based preschool provider that provides preschool services.

A. Eligibility

1. Every child in the state who is three (3) years of age, and is a child with disabilities, is eligible for preschool services in accordance with their Individualized Education Program (IEP).
2. Children who are three (3) years of age and are not eligible to enroll in kindergarten in the next school year, or who are under three (3) years of age and reside in a community in which a school district operates a district preschool program with a waiver to serve children under three (3) years of age, may be eligible for preschool services if they are low-income or have at least one (1) qualifying factor.

B. Preschool Services

1. Subject to available appropriations to provide preschool services for children three (3) years of age, a child three (3) years of age who is not eligible to enroll in kindergarten in the next school year, and is in a low-income family per rule section 4.105(A), or meets at least one (1) qualifying factor identified in rule section 4.105(B), may receive a minimum of ten (10) hours per week of preschool program services.
2. Subject to available appropriations with a waiver to serve children under three (3) years of age, a child who is under three (3) years of age and is in a low-income family per rule section 4.105(A), or meets at least one (1) qualifying factor identified in rule section 4.105(B), may receive a minimum of ten (10) hours per week of preschool program services.

4.107 ELIGIBILITY AND PRESCHOOL SERVICES FOR CHILDREN FOUR (4) YEARS OF AGE, IN THE YEAR PRECEDING KINDERGARTEN

This rule section is promulgated pursuant to sections 26.5-4-204(3)(a)(I), (II), and (V) and 26.5-4-208(3)(a), C.R.S.

A. Eligibility

1. Every child in the state who is four (4) years of age, and is a child with disabilities, is eligible for preschool services in accordance with their Individualized Education Program (IEP).
2. Children in the state who are in the school year preceding the school year in which the child is eligible to enroll in kindergarten, are eligible for ten (10) hours of universal preschool services per week.

3. ~~Children who are in the school year preceding the school year in which the child is eligible to enroll in kindergarten, may be eligible for additional preschool services if they are low-income or have at least one (1) qualifying factor. Children who are three (3) years of age, or who reside in a community in which a school district operates a district preschool program with a waiver to serve children under three (3) years of age, and children who are in the school year preceding the school year in which the child is eligible to enroll in kindergarten are eligible for preschool services if the child's family is low income such that the child's parent or guardian's gross income is below 270% of the Federal Poverty Guideline (FPG):~~

B.4.104 ~~Additional Eligibility and~~ Preschool Services

- ~~A. Subject to available appropriations the amount distributed to school districts to provide preschool services for children three (3) years of age, a child three (3) years of age who is not eligible to enroll in kindergarten in the next school year, and is in a low income family per rule section 4.1053(B)(1), above, or meets at least one (1) qualifying factor identified in rule section 4.105(C)3(B)(2)-(5), may receive a minimum of ten (10) hours per week per week of preschool program services.~~

- ~~B. Subject to available appropriations the amount distributed to school districts with a waiver to serve children under three (3) years of age, a child who is under three (3) years of age and is in a low income family per rule 4.1063(B)(1), or meets at least one (1) qualifying factor identified in rule section 4.105(C)3(B)(2)-(5), may receive a minimum of ten (10) hours per week of preschool program services.~~

- 1C. Subject to available appropriations, and after the Department allocates the amounts necessary to fund preschool services for eligible children who are three (3) years of age or younger, for children with disabilities, and to fully fund universal preschool services for children who enroll, the Department may distribute ~~specified purpose~~ additional funding equivalent to five (5) hours of preschool programming per week to children who enroll in the year preceding eligibility for enrollment in kindergarten to achieve the specified purpose of increasing whole child developmental outcomes and meeting family needs, by expanding universal access to preschool programs to a minimum of half-day preschool service.

- 2D. Subject to available appropriations and after making the efforts in rule subsection 4.108(E)(F), below, a child who is in a low-income family per rule section 4.1053(A), or who meets at least one (1) qualifying factor in rule section 4.1053(B), may receive fifteen (15) additional hours per week of additional preschool ~~program~~ services in the school year preceding the school year in which the child is eligible to enroll in kindergarten to achieve full-day preschool service. ~~G. Participating preschool providers may serve up to the number of preschool students allowed for by their current child care license.~~

4.1085 PRESCHOOL PROGRAM FUNDING AND PER-CHILD RATES FOR CHILDREN THREE (3) AND FOUR (4) YEARS OF AGE AND FUNDING FORMULA

- A. Participating providers must agree to guarantee families at least the minimum number of hours defined in this rule for the rate that is provided.
- B. Pursuant to section 26.5-4-208(3)(b), C.R.S., in a year in which there is insufficient funding to provide additional preschool services to all eligible children, those eligible children who are in low-income families and meet at least one (1) qualifying factor will be prioritized.

- CE.** Excess funds allocated to the preschool program through underspent funding for children three (3) years of age, or younger in waiver districts, and/or funds remaining after meeting the uses described in section 26.5-4-209(3)(a), C.R.S., may be distributed by the Department through ~~additional~~ hours of additional preschool services for children who enroll in the year preceding eligibility for enrollment in kindergarten.
- DE.** The Department, working with local coordinating organizations, shall make every effort to blend and braid preschool programming funds where possible with head start, local funding dollars, and the Colorado Child Care Assistance Program (CCCAP), prior to distributing additional preschool programming funds to a child who is in a low-income family per rule section 4.1053(A), or who meets at least one (1) qualifying factor in rule section 4.1053(B).
- EE.** The per-child rate funding formula for all types of preschool services covered under the preschool program applies to the following categories of services that a family may enroll their eligible child in, as specified in sections 26.5-4-204 and 208, C.R.S., statute and clarified in these rules:
1. Universal preschool ~~program~~ services for children in the school year before they are eligible for kindergarten as described in rule section 4.104(A)(1).
 2. Pursuant to section 26.5-4-204(3)(b), C.R.S., all children with disabilities described in rule sections 4.106(A)(1) and 4.107(A)(1), who are three (3) or four (4) years of age, are eligible to receive funding for preschool services in accordance with their Individualized Education Program (IEP). Preschool services for children 3 or 4 years of age with disabilities.
 3. Preschool services for eligible ~~and qualifying~~ children three (3) years of age or younger and under, in a waiver districts as described in rule section 4.106(A)(2).
 4. Additional Preschool services to achieve a specified purpose as described in rule section 4.107(B).
 5. Supplemental Hours of Additional preschool services for eligible children four (4) years of age based on low-income status or meeting at least one (1) qualifying factor as described in rule section 4.107(A)(3).
- EE.** **Formula and parameters.** The Colorado Universal Preschool Program rate formula is expressed as $((PKC * PS * PA) + (PKC * (1 - PS)) * CL) * LIC * GF * QE * CPI$. The formula includes a base rate cost of high quality preschool services (PKC) with specific parameters adjusting for personnel costs (PS) and variances to costs by region (PA). Further adjustments are applied for local costs of living (CL), considerations of a community's poverty level (LIC), geographical factors (GF), increased quality of services (QE), and an annual adjustment for inflation (CPI).
1. **PKC (pre-k costs)** means the base cost of providing high quality preschool services based on unique characteristics of provider settings and the families/children they serve, recognized best practices and evidence-based standards, pursuant to sections 26.5-4-208(1)(A)(I) and 26.5-4-205(2), C.R.S.
 2. **PS (personnel share)** means the share of costs accounted for by personnel costs, including salaries and benefits.
 3. **PA (personnel adjustment)** means the adjustment factor that accounts for regional variations in personnel costs.

4. **CL (cost of living)** means a cost-of-living adjustment determined at the county level to reflect evolving local economic realities and support recruitment and retention of a high-quality workforce, as required by section 26.5-4-208(1)(A)(III), C.R.S.
5. **LIC (low income by county)** means the parameter determined at the county level to account for the identification of children in low-income families, as defined by rule section 4.1053(A) and pursuant to section 26.5-4-208(1)(A)(IV), C.R.S.
6. **GF (geographic factor)** means the factor that adjusts for regional differences and circumstances unique to rural communities that result in variations in the cost of providing preschool services, which may include difficulties in achieving economies of scale in rural areas and in recruiting and retaining preschool educators, as required by section 26.5-4-208(1)(A)(III), C.R.S.
7. **QE (quality enhancement)** means the component that accounts for the cost of providing professional development activities and salary incentives to teachers and paraprofessionals pursuant to sections 26.5-4-208(1)(A)(I) and 26.5-4-205(2), C.R.S.
8. **CPI (consumer price index)** means the annual rate of inflation estimated for the Denver-Aurora-Lakewood core based statistical area that is applied to account for exigent economic changes.

4.109 GENERAL REQUIREMENTS AND PROVISIONS

- A. Beginning July 1, 2024, and continuing thereafter, all eligible preschool providers must meet the following minimum requirements as a condition of participating in the Preschool Program:
 1. The minimum number of planned teacher-pupil contact hours of instructional services scheduled to be delivered by an eligible preschool provider for all students enrolled in the Preschool Program shall not be less than three-hundred and sixty (360) hours per school year.
 - a. When fulfilling this requirement, eligible preschool providers may take into consideration the number of available teacher-pupil contact hours left in the school year based on when a child enrolls in the Preschool Program, and this requirement shall not be construed as requiring three-hundred and sixty (360) planned teacher-pupil contact hours of instructional services when a child is not enrolled in the Preschool Program for the entire school year.
 2. Eligible preschool providers shall maintain staff-child ratios and maximum group sizes in accordance with the applicable maximum ratios and group sizes as determined in the "Rules Regulating Child Care Centers" located in 8 CCR 1402-1, rule section 2.217(A), except that, beginning July 1, 2025, no classroom of an eligible preschool provider shall have a staff-child ratio in excess of 1:10 or a maximum group size in excess of twenty (20); or in accordance with the primary provider's license type for a family child care home, and the "Rules Regulating Family Child Care Homes" located in 8 CCR 1402-1, rule sections 2.305-3.310.
 - a. Notwithstanding the requirements of 4.1089(A)(2), if an eligible preschool provider has applied for and received a waiver pursuant to 8 CCR 1402-1, rule section 2.115 which allows the eligible preschool provider to serve a group size which is larger than twenty (20), the eligible preschool provider is allowed to serve children in accordance with the terms of that waiver received, so long as all other requirements are met.

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3. This includes, but is not limited to, an eligible preschool provider's obligation to ensure children with disabilities are served in a manner which conforms to the training, certification, referral, identification, licensing, authorization, and dispute resolution requirements found in 1 CCR 301-8, rule section 3.02(3).

4.110 PROVIDER MATCHING CRITERIA

- A. Eligible preschool providers may utilize the following programmatic preferences to the deferred acceptance algorithm component of the matching process:

1. Faith-based providers granting preference to members of their congregation;
2. Cooperative preschool providers requiring participation in the cooperative;
3. School districts maintaining enrollment consistent with their established boundaries;
4. Participating preschool providers reserving placements for a student(s) with an Individualized Education Program (IEP) to ensure conformity with obligations incurred pursuant to the Individuals with Disabilities Education Act, 20 U.S.C. section 1400 (2004), or the Exceptional Children's Education Act, Article 20 of Title 22, C.R.S.;
5. Head Start programs' adhering to any applicable federal law requirements including eligibility requirements;
6. Participating preschool providers granting preference to an eligible child of one of their employees;
7. Participating preschool providers granting preference to an eligible child in order to ensure continuity-of-care for that child;
8. Participating preschool providers granting preference to an eligible child in order to keep siblings similarly located;
9. Participating preschool providers granting preference to an eligible child who is multilingual in order to ensure the proper delivery of services to that child.
10. "Participating preschool providers granting preference to an eligible child based on the child and/or family ~~having either being a part of a specific community; having specific competencies or interests; having a specific relationship to the provider or to the provider's employees, students, or their families; receiving specific public assistance benefits; status~~ or participating in a specific activity. Participating preschool providers seeking to utilize this preference, must ensure:
 - a. That the specific ~~community, competencies or interests, relationship, public assistance benefit, status~~ or ~~specific~~ activity being required of children and/or families who attend that eligible preschool provider is required of all participating children and/or families;
 - b. ~~That the specific status or specific activity being required is related to the programming offered by the participating preschool provider;~~
 - bc. That the implementation of requiring the specific ~~community, competencies or interests, relationship, public assistance benefit, status~~ or ~~specific~~ activity ~~does not necessitate the inability to comply~~ will not conflict with any other provision of

the Colorado Universal Preschool Program statutes at sections 26.5-4-201 through 26.5-4-211, C.R.S., nor with any other applicable law or regulation; and

cd. Examples include, but are not limited to, participating preschool providers who require a focus in a certain knowledge area (such as science, technology, engineering, and math (“STEM”)); providers who serve families with a family member who works or attends school at a specific site(s) or location(s); providers who serve families within a specific geographical catchment area; providers who require a certain amount of volunteering or participation by the participating family; providers who require certain vaccinations for the health and safety of its staff and students; and providers who serve families who are receiving a specific public assistance benefit(s) such as housing assistance.

B. In utilizing these programmatic preferences, eligible preschool providers must still comply with rule section 4.109(B).

4.111 INSTRUCTIONAL PRACTICE REQUIREMENTS

A. Learning Approaches.

Beginning July 1, 2024, and continuing thereafter, all eligible preschool providers must utilize an early learning and assessment approach approved and included in the Resource Bank by the Department that:

1. Aligns with the Colorado Early Learning and Development Guidelines and the Colorado Academic Standards;
2. Uses assessment findings for instructional decision-making;
3. Is culturally, developmentally, and linguistically appropriate; and
4. Is inclusive of and appropriate for the diverse needs of each individual learner.

B. On-Site Observations.

At least every three (3) years, eligible preschool providers will receive an independent on-site observation of environmental quality conducted by the Department. The Department will conduct these observations, in alignment with existing on-site observations performed pursuant to participation in Colorado Shines, the state quality rating and improvement system established pursuant to section 26.5-5-101, C.R.S. The Department shall conduct the observations only using staff who are trained in and familiar with assessing program environmental quality in the preschool setting. The Department shall ensure that observational methods and related resources that meet this requirement are included in the Resource Bank and will be considered and reviewed in accordance with sections 26.5-4-205(3)(b) and (c), C.R.S.

1. Measurement of a preschool provider’s environmental quality shall include, but not be limited to:
 - a. The quality of adult-child and child-child interactions;
 - b. The quality of the overall learning environment, including student and staff supportive services; and
2. The Department shall ensure observations are conducted in an individualized and differentiated manner so that they are specific to each provider in supporting quality

improvement for educators and classrooms while incorporating that provider's level of access to resources in order to ensure these standards are supported and implemented with fidelity.

- C. Nothing in these rules shall be construed to affect an eligible preschool provider's right to engage in privately funded, inherently religious activity or affect the independence of eligible preschool providers, including any rights protected by the Colorado and U.S. Constitutions and applicable law.

4.112 HEALTHY DEVELOPMENT REQUIREMENTS

- A. Beginning July 1, 2024, and continuing thereafter, eligible preschool providers must meet the following requirements as a condition of participating in the Preschool Program:

1. Within six (6) months of participating in the Preschool Program, eligible preschool providers must create, make available publicly (either on the provider's website or in a handbook distributed to all participating families) and for the Department, and implement policies and procedures which ensure:
 - a. Beginning July 1, 2025, and continuing thereafter, the administration of developmental (including hearing, vision, and dental, as well as fine and gross motor, social-emotional, cognitive, and language) screening services, and with consent of the family, referral processes to ensure adequate access to potentially needed specialized services by participating children and families, including policies for ensuring translation services for children and families in their home language.
2. The Department shall ensure that the assessments, tools, and related resources that meet the requirements of this rule subsection 4.111(A)(1)(a) above, and are included in the Resource Bank and will be considered and reviewed in accordance with sections 26.5-4-205(3)(b) and (c), C.R.S.
3. Eligible preschool providers will be responsible for ensuring the development of the policies and procedures as outlined in this rule subsection 4.111(A)(1), as well as ensuring family access to the screening services, referral processes, and translation services as described in this rule subsection 4.111(A)(1)(a) above. The entity or individual actually conducting the screening services, referral processes, and/or translation services, are responsible for ensuring that those services are conducted using valid and reliable methods as described in this rule subsection 4.111(A)(4) below, and are included in the Resource Bank as described in this rule subsection 4.111(A)(2) above.
4. Any screening services, referral processes, or translation services administered pursuant to this rule subsection 4.111(A)(1)(a) above, and must be conducted using valid and reliable screening tools and other related resources that are developmentally, culturally, and linguistically appropriate, and must:
 - a. Require the screening services to be offered or coordinated within forty-five (45) calendar days of when a child first attends the eligible preschool provider;
 - b. Entail the use of research-based developmental standardized screening tools;
 - c. Meaningfully incorporate other information from family members, teachers, or other individuals with familiarity with the child's typical behavior;

- d. Be tailored and conducted in a manner which promotes and allows for individualized usable information;
 - e. When involving a child suspected to need specialized instruction, the provider must comply with all Child Find referral procedures established by the Department of Education and refer the family to the Child Find contact in the child's administrative unit of residence; and
 - f. Ensure that participating children and families have a pathway to access early childhood mental health programs.
5. All eligible preschool providers must notify families of the opportunity to participate in an annual survey of families' experiences in regards to screening, referral, and early childhood mental health best practices to be conducted by the Department.

4.113 FAMILY AND COMMUNITY ENGAGEMENT REQUIREMENTS

- A. Beginning July 1, 2024, and continuing thereafter, eligible preschool providers must meet the following requirements as a condition of participating in the Preschool Program:
- 1. Within six (6) months of participating in the Preschool Program, preschool providers must create, make available publicly (either on the provider's website or in a handbook distributed to all participating families) and for the Department, and implement policies and procedures which ensure:
 - a. The usage of interpreters or other language resources to effectively communicate with families in their home language;
 - b. Seeking input from participating families on priorities, interests, home routines, and cultural and social practices;
 - c. Engaging families around goals which inform the preschool provider's interactions and instruction with children, including multilingual learners;
 - d. Engaging families and community partners in decision-making regarding the preschool provider's operations; and
 - e. Involving families in the transition of their children into and out of the Preschool Program, including between classrooms within the Preschool Program and into Kindergarten; and-
 - f. The quality of program-family and program-staff interactions.
 - 2. All eligible preschool providers must notify families of the opportunity to participate in an annual survey of families' experiences with meaningful and culturally appropriate involvement in the program to be conducted by the Department.

4.114 PROFESSIONAL DEVELOPMENT REQUIREMENTS

- A. The Department shall ensure that professional development hours required pursuant to this rule section be in alignment with Colorado's Competencies for Early Childhood Educators and Professionals.
- 1. This includes alignment with the seven (7) domain areas of:

- a. Child growth and development, and learning;
 - b. Child observation and assessment;
 - c. Family and community partnerships;
 - d. Social-emotional health and development promotion;
 - e. Health, safety and nutrition;
 - f. Professional practice; and
 - g. Teaching practices.
2. Professional development completed pursuant to the requirements located in 8 CCR 1402-1, rule section 2.216(A), to meet the licensing requirement of completing fifteen (15) clock hours of ongoing professional development each year, may be used to also fulfill the professional requirements of this rule section if it meets the applicable requirements.

B. Lead Teacher Professional Development.

Beginning July 1, 2025, within six (6) months of employment, lead teachers within Preschool Program classrooms must demonstrate completion of, at a minimum, four (4) hours of professional development in the preschool provider's selected early learning and assessment approach included in the Resource Bank and shall be aligned with the domain areas of teaching practices; child observation and assessment; or social-emotional health and development promotion.

1. Nothing within this rule section shall be construed as to prevent a preschool teacher who is licensed by the Colorado Department of Education to use the professional development required to renew their teaching license pursuant to article 60.5 of title 22, C.R.S., to also meet the requirements of this rule subsection, if it meets the applicable requirements.
2. Nothing within this rule subsection shall be construed as requiring this training for family child care home staff aides or substitutes, and shall only apply to an equally qualified provider, applicant 2, or qualified substitute as the "lead teacher".
3. Nothing within this rule subsection shall be construed as requiring this training for individuals who are employed or volunteer only on a short term basis.
4. Applicable accredited college coursework, non-expired certifications, or hours of professional development may be applied retroactively. Applicable accredited college coursework and non-expired certifications may be applied retroactively with no time limit, while hours of professional development may be applied retroactively up to a maximum of three (3) years after the date the relevant professional development is completed.
 - a. Applicable accredited college coursework which meets the requirements of this rule subsection (B) shall be credited at a rate of fifteen (15) hours of professional development for each one (1) semester credit hour.
5. Verifying documentation shall be submitted demonstrating completion of the applicable professional development in accordance with policies and procedures established by the Department and published by the Department in an easily accessible manner including, but not limited to, being posted on the Department's website.

6. Beginning July 1, 2026, and continuing thereafter, the number of hours that lead teachers within Preschool Program classrooms must demonstrate the completion of pursuant to the one-time requirement of subsection (B) of this rule section, is eight (8) hours.

C. All Staff Professional Development.

Beginning July 1, 2024, within twelve (12) months of employment at an eligible preschool provider, all staff responsible for the direct care of children (including but not limited to lead teachers, administrators, primary providers, equally qualified providers, and equally qualified substitutes) must complete, at a minimum, four (4) hours of professional development in the domain area of social-emotional health and development promotion, with at least one (1) hour of training in trauma-informed practices specific to each staff member's professional role.

1. Nothing within this rule section shall be construed as to prevent a preschool teacher who is licensed by the Colorado Department of Education to use the professional development required to renew their teaching license pursuant to article 60.5 of title 22, C.R.S., to also meet the requirements of this rule subsection, if it meets the applicable requirements.
2. Nothing within this rule subsection shall be construed as requiring this training for family child care home staff aides or substitutes, and shall only apply to an equally qualified provider, applicant 2, or qualified substitute as the "lead teacher".
3. Nothing within this rule subsection shall be construed as requiring this training for individuals who are employed or volunteer only on a short term basis.
4. Applicable accredited college coursework, non-expired certifications, or hours of professional development may be applied retroactively. Applicable accredited college coursework and non-expired certifications may be applied retroactively with no time limit, while hours of professional development may be applied retroactively up to a maximum of three (3) years after the date the relevant professional development is completed.
5. Verifying documentation shall be submitted demonstrating completion of the applicable professional development in accordance with policies and procedures established by the Department and published by the Department in an easily accessible manner including, but not limited to, being posted on the Department's website.
6. Beginning July 1, 2025, and continuing thereafter, the number of hours that all staff responsible for the direct care of children must demonstrate the completion of pursuant to the one-time requirement of subsection (C) of this rule section, is eight (8) hours.

D. Administrator and Further Lead Teacher Professional Development. Beginning July 1, 2025, within twelve (12) months of employment, all lead teachers and one (1) administrator of each preschool provider, must complete four (4) hours of professional development in the domain area of family and community partnerships.

1. Nothing within this rule section shall be construed as to prevent a preschool teacher who is licensed by the Colorado Department of Education to use the professional development required to renew their teaching license pursuant to article 60.5 of title 22, C.R.S., to also meet the requirements of this rule subsection, if it meets the applicable requirements.
2. Nothing within this rule subsection shall be construed as requiring this training for family child care home staff aides or substitutes, and shall only apply to an equally qualified provider, applicant 2, or qualified substitute as the "lead teacher."

3. Nothing within this rule subsection shall be construed as requiring this training for individuals who are employed or volunteer only on a short term basis.
4. Applicable accredited college coursework, non-expired certifications, or hours of professional development may be applied retroactively. Applicable accredited college coursework and non-expired certifications may be applied retroactively with no time limit, while hours of professional development may be applied retroactively up to a maximum of three (3) years after the date the relevant professional development is completed.
5. Verifying documentation shall be submitted demonstrating completion of the applicable professional development in accordance with policies and procedures established by the Department and published by the Department in an easily accessible manner including, but not limited to, being posted on the Department's website.
6. Beginning July 1, 2026, and continuing thereafter, the number of hours that all lead teachers and one (1) administrator of each preschool provider must demonstrate the completion of pursuant to the one-time requirement of subsection (D) of this rule section, is eight (8) hours.

Editor's Notes

History

New rule emer. rule eff. 09/29/2022.

Rules 4.101, 4.104, 4.105 emer. rules eff. 11/21/2022.

Rules 4.100-4.103 eff. 01/14/2023.

Rules 4.101, 4.104, 4.105 eff. 03/17/2023.

Rule 4.105 emer. rule eff. 06/23/2023.

Rule 4.105 eff. 09/30/2023.

New Rules 4.100 – 4.102, Revised Rules 4.103-4.114 eff. 04/14/2024.



Rule Author/Division Director: Dawn Odean

Email(s): Dawn.odean@state.co.us

Program/Division: Colorado Universal Preschool Program (UPK)

CDEC Tracking No.: 2023-11-001

CCR Number(s): 8 CCR 1404-1

SOS Tracking No.:

RULEMAKING PACKET

Reason and Justification of the proposed rule or amendment(s):

Multiple/Other ▾

If there are "Multiple/Other" reasons, please explain:

These revisions propose to refine the Colorado Universal Preschool Program's Qualifying Factors to ensure that all children living in poverty have access to additional hours of Universal Preschool in the year before kindergarten. The additional revisions are to align the rules with recent federal updates (federal poverty guidelines), state statutes, and add clarity.

Provide a description of the proposed rule or amendment(s) that is clearly and simply stated, and what CDEC intends to accomplish:

The proposed revisions to the Colorado Universal Preschool Program (UPK) rule section 4.106 Eligibility (formerly 4.103) is to establish a new qualifying factor for "children in poverty" which is identified at 100% of the Federal Poverty Guidelines (FPG). Additional revisions to the rule are to update the FPG amounts in the table of rule section 4.106(B) (formerly 4.103(A)), consistent with the recent annual update, and all other edits are technical clean-up to ensure the rule language aligns with statute and is easy for stakeholders to follow.

Statutory Authority: (Include Federal Authority, if applicable)

Sections 26.5-1-105(1), 26.5-4-204(4), and 24-4-103, C.R.S.

Does the proposed rule or amendment(s) impact other State Agencies or Tribal Communities?

☐ Yes

☒ No

If Yes, identify the State Agency and/or Tribal Community and describe collaboration efforts:

Does the proposed rule or amendment(s) have impacts or create mandates on counties or other governmental entities? (e.g., budgetary requirements or administrative burdens)

☐ Yes

☒ No

If Yes, provide description:

<p>Effective Date(s) of proposed rule or amendment(s): (<u>E</u>mergency/<u>P</u>ermanent)</p>	<div> <input type="checkbox"/> Mandatory <input checked="" type="checkbox"/> Discretionary </div> <div> (E) Effective Date: 1/22/24 (P) Effective Date: 4/14/24 </div> <div> (E) Termination Date: 5/21/24 </div>				
<p>Emergency Rule Justification:</p>	<p>Immediate adoption of these proposed rules to revise and expand eligibility requirements is imperatively necessary for the public health and welfare so that more families qualify for additional universal preschool program services before enrollment begins for the 2024-2025 school year.</p>				
<p>Is the proposed rule or amendment(s) included on the Regulatory Agenda?</p>	<div> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No </div> <p>If no, please explain:</p>				
<p>Does the proposed rule or amendment(s) conflict, or are there inconsistencies with other provisions of law?</p>	<div> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No </div> <p>If Yes, please explain:</p>				
<p>Does the proposed rule or amendment(s) create duplication or overlapping of other rules or regulations?</p>	<div> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No </div> <p>If Yes, explain why:</p>				
<p>Does the proposed rule or amendment(s) include material that is incorporated by reference¹?</p>	<div> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No </div> <p>If Yes, provide source:</p> <p>“IDEA” means the federal “Individuals with Disabilities Education Act”, 20 U.S.C. sections 1400 through 1491, as amended, and its implementing regulations at 34 C.F.R. Parts 300 and 303 (2023), herein incorporated by reference. No later editions or amendments are incorporated. These regulations are available at no cost from the United States Department of Education at www.ecfr.gov. These regulations are available for public inspection and copying at the Colorado Department of Early Childhood, 710 S. Ash St., Denver, CO 80246, during normal business hours.</p>				
<p>Does the proposed rule or amendment(s) align with the department’s rulemaking objectives?</p> <p>Choose all that apply.</p>	<table border="1"> <tr> <td><input type="checkbox"/></td> <td>Reduce the administrative burden on families and providers accessing, implementing, or providing programs and/or services.</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Decrease duplication and conflicts with implementing programs and providing services.</td> </tr> </table>	<input type="checkbox"/>	Reduce the administrative burden on families and providers accessing, implementing, or providing programs and/or services.	<input checked="" type="checkbox"/>	Decrease duplication and conflicts with implementing programs and providing services.
<input type="checkbox"/>	Reduce the administrative burden on families and providers accessing, implementing, or providing programs and/or services.				
<input checked="" type="checkbox"/>	Decrease duplication and conflicts with implementing programs and providing services.				

¹ Incorporation by Reference is all or any part of a code, standard, guideline, or rule that has been adopted by an agency of the United States, this state, or another state, or adopted or published by a nationally recognized organization or association, pursuant to section 24-4-103(12.5), C.R.S.

	<input checked="" type="checkbox"/>	Increase equity in access and outcomes to programs and services for children and families.
	<input checked="" type="checkbox"/>	Increase administrative efficiencies among programs and services provided by the department.
	<input checked="" type="checkbox"/>	Ensure that rules are coordinated across programs and services so that programs are implemented and services are provided with improved ease of access, quality of family/provider experience, and ease of implementation by state, local, and tribal agencies.

Rulemaking Proceedings

Type of Rulemaking: Emergency or Permanent ² [Permanent Tier I or Tier II]	<div>Emergency and Permanent ▾</div> <div>N/A (Emergency and Permanent) ▾</div>
Stakeholder Engagement: Public Folder: Proposed rule, webinar recordings/transcripts, written stakeholder comments, material from small/large focus groups, written petitions/requests, surveys, data, research, reports, published papers, and documents used to develop the proposed rule or amendment(s).	List of activities and dates: Email and post draft rules on the CDEC Public Notices webpage , to solicit stakeholder feedback: 10/26/23 - 11/22/23 Public folder containing all rulemaking material: https://drive.google.com/drive/folders/15eeljO1sJKOhTTN2sRNwFcMeu_4VlC6u
Assistant Attorney General Review:	11/29/23 - 12/29/23
RAC County Subcommittee Review Date (if required):	1/8/24 (emergency rule review) 2/1/24 (permanent rule review)
Rules Advisory Council (RAC) Review Date:	1/11/24 (emergency rule review) 2/8/24 (permanent rule review)

² Tier I is used for proposed rule or amendment(s) that have substantive changes, require substantial stakeholder engagement, and will be considered at two Public Rulemaking Hearings (PRH). The first PRH is held for discussion, and the second PRH is held to consider adoption. Tier II is used for proposed rule or amendment(s) that include technical changes, do not require substantial stakeholder engagement, and will be considered at only one Public Rulemaking Hearing (PRH) for adoption.

Public Rulemaking Hearing Date(s): [Discussion/Adoption]	1/22/24 (emergency adoption) 2/22/24 (permanent adoption)
-------------------------------------------------------------	--------------------------------------------------------------

Regulatory and Cost Benefit Analysis

1. **Community Impact:** Provide a description of the stakeholders that will be affected by the proposed rule or amendment(s), and identify which stakeholders will bear the costs, and those who will benefit. How will the proposed rule or amendment(s) impact particular populations, such as those experiencing poverty, immigrant/refugee communities, non-English speakers, and rural communities?

The proposed rule revisions largely affect families, participating Colorado Universal Preschool Program Providers (UPK providers), and Local Coordinating Organizations (LCO). The Department anticipates there will be no costs to families, UPK providers, or LCOs as a result of these changes; but rather families, UPK providers, and LCOs will benefit from the proposed changes to expand eligibility for additional UPK preschool services (hours). By establishing a new UPK qualifying factor, which is intended to expand eligibility for children experiencing poverty, the proposed changes seek to elevate the identified populations.

2. **Quality and Quantity:** Provide a description of the probable quantitative and qualitative impact on persons affected by the proposed rule or amendment(s), and comparison of the probable costs and benefits of implementation versus inaction. What are the short- and long-term consequences of the proposed rule or amendment(s).

The short and long term impact of this proposed change is more families experiencing poverty will become eligible and have access to additional preschool services; UPK providers will receive increased funding for providing additional preschool services to the targeted populations; and UPK providers and LCOs will be provided rule language that adds clarity of the UPK program. The Department estimates the introduction of this qualifying factor will grant upwards of 3,000 children access to full-day preschool in the 2024-25 school year that do not currently qualify for this school year.

3. **Potential Economic Benefits/Disadvantages:** What are the anticipated economic benefits of the proposed rule or amendment(s), such as: economic growth, creation of new jobs, and/or increased economic competitiveness? Are there any adverse effects on the economy, consumers, private markets, small businesses, job creation, and economic competitiveness?

The potential economic benefits of this proposed rule change is economic growth and job creation within Early Childhood Education. As more students qualify for additional preschool services (hours), there will be a subsequent need for UPK providers in this mixed delivery system.

4. **Fiscal Impacts:** What are the anticipated direct and indirect costs for the state/department to implement, administer, and enforce the proposed rule or amendment(s)? What are the direct and indirect costs to each of the following entities to comply with the proposed rule or amendment(s)? For each, describe the impact or indicate “not applicable.”

Department	The cost of the additional qualifying factor is estimated to be \$12.5M in FY 2024-25 and \$13M in FY 2025-26 through the Universal Preschool Program funding.
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Local Governments/ Counties	Not applicable.
Providers	Not applicable.
Community Partners (e.g., School Districts, Early Childhood Councils, Local Coordinating Organizations, etc.)	The biggest impact of community partners, including Local Coordinating Organizations (LCO) is that these entities will have clarity in rule on how the UPK program operates which will allow community partners to better support families and UPK providers. There are no associated fiscal costs.
Other State Agencies	Not applicable.
Tribal Communities	Not applicable.

5. **Evaluation:** How will implementation of the proposed rule or amendment(s) be monitored and evaluated? Please include information about measures and indicators that CDEC will utilize, including information on specific populations (identified above).

The Universal Preschool Program is required by statute to be evaluated through an independent evaluation (Section 26.5-4-207, C.R.S.). The Department is required to contract with an independent evaluator to measure immediate and long-term child outcomes and provide recommendations to improve teaching and learning, assess professional development, improve teacher-child interactions and inform a continuous improvement process. The Department is required to share this information through the annual SMART Act hearing, beginning in January 2025 (Section 26.5-4-210, C.R.S.). This evaluation will include an evaluation of the allocation of additional hours.

6. **Comparative Analysis:** Provide at least two alternatives to the proposed rule or amendment(s) that can be identified, including the costs and benefits of pursuing each of the alternatives.

This revision of the Universal Preschool Qualifying Factor rule is in response to concerns elevated from both providers and families after the first year of factors were operationalized for additional hours of preschool. As written, the factors did not ensure that the most vulnerable families were able to access additional hours. Revising the rule ensures that all children living in poverty have access to additional hours of Universal Preschool in the year before kindergarten. Alternatively, the qualifying factors may remain in place as initially established, however this would not address the concerns elevated across Colorado.

7. **Comparative Analysis:** Are there less costly or less intrusive methods for achieving the purpose of the proposed rule or amendment(s)? Explain why those options were rejected.

Statute directs that the Department allocate additional hours, subject to available appropriations, to children that are low-income and have one additional qualifying factor. There are no identified less costly or less intrusive alternatives to providing full-day preschool to children in poverty (100% FPG) than the addition of this as a qualifying factor.



Rule Author/Division Director: Dawn Odean

Email(s): Dawn.odean@state.co.us

Program/Division: Colorado Universal Preschool Program (UPK)

CDEC Tracking No.: 2023-06-013

CCR Number(s): 8 CCR 1404-1

SOS Tracking No.: TBD

RULEMAKING PACKET

Reason and Justification of the proposed rule or amendment(s):

Compliance with Federal and/or State laws, mandates, or guidelines ▾
If there are "Multiple/Other" reasons, please explain:

Provide a description of the proposed rule or amendment(s) that is clearly and simply stated, and what CDEC intends to accomplish:

Establish Quality Standards for participating providers in the Colorado Universal Preschool Program (UPK) to implement Colorado House Bill 22-1295, and add "Early Numeracy" to the Quality Standards, to implement Colorado House Bill 23-1231.

Statutory Authority:
(Include Federal Authority, if applicable)

Sections 26.5-1-105(1), 26.5-4-204(4)(a), 26.5-4-205(1), and 24-4-103, C.R.S.

Does the proposed rule or amendment(s) impact other State Agencies or Tribal Communities?

☒ Yes

☐ No

If Yes, identify the State Agency and/or Tribal Community and describe collaboration efforts: Colorado Department of Education (CDE)

Does the proposed rule or amendment(s) have impacts or create mandates on counties or other governmental entities? (e.g., budgetary requirements or administrative burdens)

☐ Yes

☒ No

If Yes, provide description:

<p>Effective Date(s) of proposed rule or amendment(s): (<u>E</u>mergency/<u>P</u>ermanent)</p>	<div> <input type="checkbox"/> Mandatory <input checked="" type="checkbox"/> Discretionary </div> <div> (E) Effective Date: N/A (P) Effective Date: 4/14/24 </div> <div> (E) Termination Date: N/A </div>
<p>Is the proposed rule or amendment(s) included on the Regulatory Agenda?</p>	<div> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No </div> <p>If no, please explain:</p>
<p>Does the proposed rule or amendment(s) conflict, or are there inconsistencies with other provisions of law?</p>	<div> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No </div> <p>If Yes, please explain:</p>
<p>Does the proposed rule or amendment(s) create duplication or overlapping of other rules or regulations?</p>	<div> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No </div> <p>If Yes, explain why:</p>
<p>Does the proposed rule or amendment(s) include material that is incorporated by reference¹?</p>	<div> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No </div> <p>If Yes, provide source:</p> <ol style="list-style-type: none"> 1. "IDEA" means the federal "Individuals with Disabilities Education Act", 20 U.S.C. SEC.sections 1400 through 1491 ET SEQ., as amended, and its implementing regulations at 34 C.F.R. Parts 300 and 303 (2023), herein incorporated by reference. No later editions or amendments are incorporated. These regulations are available at no cost from the United States Department of Education at www.ecfr.gov. These regulations are available for public inspection and copying at the Colorado Department of Early Childhood, 710 S. Ash St. Denver, CO 80246, during normal business hours. 2. "Standards for Placement of Preschoolers with IEPs in Educational Programs (October 2023)", herein incorporated by reference. No later editions or amendments are incorporated. These standards are available at no cost from the Colorado Department of Education, 201 East Colfax Avenue, Denver, CO 80203; or at https://www.cde.state.co.us/cdesped/appropriateenvironments. These standards are also available for inspection and copying at the Colorado Department of Early Childhood, 710 S. Ash Street, Bldg. C, Denver, Colorado 80246, during regular business hours.; "Rules for

¹ Incorporation by Reference is all or any part of a code, standard, guideline, or rule that has been adopted by an agency of the United States, this state, or another state, or adopted or published by a nationally recognized organization or association, pursuant to section 24-4-103(12.5), C.R.S.

	the Administration of the Exceptional Children's Educational Act" located in 1 CCR 301-8.										
<p>Does the proposed rule or amendment(s) align with the department's rulemaking objectives?</p> <p>Choose all that apply.</p>	<table border="1"> <tr> <td><input type="checkbox"/></td><td>Reduce the administrative burden on families and providers accessing, implementing, or providing programs and/or services.</td></tr> <tr> <td><input type="checkbox"/></td><td>Decrease duplication and conflicts with implementing programs and providing services.</td></tr> <tr> <td><input checked="" type="checkbox"/></td><td>Increase equity in access and outcomes to programs and services for children and families.</td></tr> <tr> <td><input type="checkbox"/></td><td>Increase administrative efficiencies among programs and services provided by the department.</td></tr> <tr> <td><input checked="" type="checkbox"/></td><td>Ensure that rules are coordinated across programs and services so that programs are implemented and services are provided with improved ease of access, quality of family/provider experience, and ease of implementation by state, local, and tribal agencies.</td></tr> </table>	<input type="checkbox"/>	Reduce the administrative burden on families and providers accessing, implementing, or providing programs and/or services.	<input type="checkbox"/>	Decrease duplication and conflicts with implementing programs and providing services.	<input checked="" type="checkbox"/>	Increase equity in access and outcomes to programs and services for children and families.	<input type="checkbox"/>	Increase administrative efficiencies among programs and services provided by the department.	<input checked="" type="checkbox"/>	Ensure that rules are coordinated across programs and services so that programs are implemented and services are provided with improved ease of access, quality of family/provider experience, and ease of implementation by state, local, and tribal agencies.
<input type="checkbox"/>	Reduce the administrative burden on families and providers accessing, implementing, or providing programs and/or services.										
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<input type="checkbox"/>	Increase administrative efficiencies among programs and services provided by the department.										
<input checked="" type="checkbox"/>	Ensure that rules are coordinated across programs and services so that programs are implemented and services are provided with improved ease of access, quality of family/provider experience, and ease of implementation by state, local, and tribal agencies.										

Rulemaking Proceedings

Type of Rulemaking: Emergency or Permanent ² [Permanent Tier I or Tier II]	<div>Permanent ▾</div> <div>Tier I ▾</div>
<p>Stakeholder Engagement and Data/Research:</p> <p>Examples: Webinar recordings/transcripts, written stakeholder comments, material from small/large focus groups, written petitions/requests, surveys, data, research, reports, published papers, and documents used to develop the proposed rule or amendment(s).</p>	<p>List of activities and dates:</p> <p>Email and post draft rules on the CDEC Public Notices webpage, to solicit stakeholder feedback: 10/30/23 - 11/22/23</p> <p>Stakeholder Meeting (Proposed Rules): November 13, 2023, at 3:00 - 4:00 pm. Please register to attend the UPK Quality Standards webinar here: https://zoom.us/webinar/register/WN_UWE5_v4TRSC5CGTVHZnzAA#/registration</p> <p>Public folder containing all rulemaking material: https://drive.google.com/drive/folders/1xaXQJLUALAFt_4_PBDGr2ZfCeYymHEOU</p>
Assistant Attorney General Review:	11/29/23 - 12/29/23

² Tier I is used for proposed rule or amendment(s) that have substantive changes, require substantial stakeholder engagement, and will be considered at two Public Rulemaking Hearings (PRH). The first PRH is held for discussion, and the second PRH is held to consider adoption. Tier II is used for proposed rule or amendment(s) that include technical changes, do not require substantial stakeholder engagement, and will be considered at only one Public Rulemaking Hearing (PRH) for adoption.

RAC County Subcommittee Review Date (if required):	1/8/24
Rules Advisory Council (RAC) Review Date:	1/11/24
Public Rulemaking Hearing Date(s): [Discussion/Adoption]	1/22/24 (Discussion) 2/22/24 (Adoption)

Regulatory and Cost Benefit Analysis

1. **Community Impact:** Provide a description of the stakeholders that will be affected by the proposed rule or amendment(s), and identify which stakeholders will bear the costs, and those who will benefit. How will the proposed rule or amendment(s) impact particular populations, such as those experiencing poverty, immigrant/refugee communities, non-English speakers, and rural communities?

The proposed rule revisions will significantly benefit children and families participating in the Colorado Universal Preschool Program (UPK) by increasing access to high-quality preschool in a variety of settings (school-based, community-based, and home-based). Research shows that children who attend high-quality preschool have higher levels of educational attainment and are less likely to experience poverty or enter the criminal justice system. Furthermore, research suggests that children from low-income families experience the greatest gains from high-quality preschool.

Universal Preschool Program providers who do not fully meet the UPK quality standards would be required to increase their program quality to meet the quality standards in order to continue participating in UPK. The proposed quality standards were designed to be accessible to the diverse range of providers participating in the Colorado Universal Preschool Program, including school district sites, community based providers, and family child care homes. All providers will receive support through a statutorily required UPK Resource Bank with inclusive early learning approaches and resources to support providers in meeting quality standards. In addition, the UPK rate that providers receive for serving children in the program was calculated to reflect the cost of providing quality care.

2. **Quality and Quantity:** Provide a description of the probable quantitative and qualitative impact on persons affected by the proposed rule or amendment(s), and comparison of the probable costs and benefits of implementation versus inaction. What are the short- and long-term consequences of the proposed rule or amendment(s).

Research shows that children who attend high-quality preschool have higher levels of educational attainment and are less likely to experience poverty or enter the criminal justice system. Furthermore, research suggests that children from low-income families experience the greatest gains from high-quality preschool. All participating Universal Preschool Providers would be required to follow the Quality Standards rules, which would impact more than 39,000 four year olds.

3. **Potential Economic Benefits/Disadvantages:** What are the anticipated economic benefits of the proposed rule or amendment(s), such as: economic growth, creation of new jobs, and/or increased economic competitiveness? Are there any adverse effects on the economy, consumers, private markets, small businesses, job creation, and economic competitiveness?

Research has shown that every \$1.00 spent on high-quality early childhood education contributes \$2.25 to Colorado's economy.³ Randomized control trials have demonstrated that a high-quality preschool program returns to society between about \$7 and \$12 for each \$1 invested.⁴

4. **Fiscal Impacts:** What are the anticipated direct and indirect costs for the state/department to implement, administer, and enforce the proposed rule or amendment(s)? What are the direct and indirect costs to each of the following entities to comply with the proposed rule or amendment(s)? For each, describe the impact or indicate "not applicable."

Department	The Department is investing \$2.6M in one-time stimulus funds to build the capacity for the Universal Preschool Program Quality Standards rules in the current fiscal year. The Department has requested to the Legislature as part of the annual Budget request \$1M in ongoing funding for FY 2024-25 and out years. Additionally, the Department has awarded \$18M in Capacity Building Grants to universal preschool program providers to meet the proposed Quality Standards.
Local Governments/ Counties	Not applicable.
Providers	Providers will be required to meet the Universal Preschool Quality Standards, which may be associated with increased direct and indirect cost. However, the Department's investments will be used to support universal preschool providers with one-time costs to achieve the Quality Standards and for the Department to enforce the rules. Additionally, the Universal Preschool rate considered the cost of quality and should support providers ongoing costs.
Community Partners (e.g., School Districts, Early Childhood Councils, etc.)	The biggest impact of community partners, including Local Coordinating Organizations (LCO) is that these entities will support UPK providers to implement the Quality Standards; this is within the scope of work for LCOs that is funded by the Department.
Other State Agencies	Not applicable.
Tribal Communities	Not applicable.

³ Butler Institute for Families Graduate School of Social Work University of Denver and Brodsky Research and Consulting, "Bearing the Cost of Early Care and Education in Colorado: An Economic Analysis," (September 2017),

⁴ Heckman, J. J., Moon, S. H., Pinto, R., Savelyev, P. A., & Yavitz, A. (2010). The Rate of Return to the High/Scope Perry Preschool Program. *Journal of Public Economics*, 94(1-2), 114-128.

5. **Evaluation:** How will implementation of the proposed rule or amendment(s) be monitored and evaluated? Please include information about measures and indicators that CDEC will utilize, including information on specific populations (identified above).

The Universal Preschool Program is required by statute to be evaluated through an independent evaluation (Section 26.5-4-207, C.R.S.). The Department is required to contract with an independent evaluator to measure immediate and long-term child outcomes and provide recommendations to improve teaching and learning, assess professional development, improve teacher-child interactions and inform a continuous improvement process. The Department is required to share this information through the annual SMART Act hearing, beginning in January 2025 (Section 26.5-4-210, C.R.S.). This evaluation will include an evaluation of the Quality Standards.

6. **Comparative Analysis:** Provide at least two alternatives to the proposed rule or amendment(s) that can be identified, including the costs and benefits of pursuing each of the alternatives.

Establishing the Universal Preschool Quality Standards in rule is required by statute (Section 26.5-4-205, C.R.S.) and key components of the rules are directed by statute. There are no considered alternatives to the proposed rule.

7. **Comparative Analysis:** Are there less costly or less intrusive methods for achieving the purpose of the proposed rule or amendment(s)? Explain why those options were rejected.

Establishing the Universal Preschool Quality Standards in rule is required by statute (Section 26.5-4-205, C.R.S.) and key components of the rules are directed by statute. There are no considered alternatives to the proposed rule.

Permanent Rules Adopted

Department

Department of Regulatory Agencies

Agency

Division of Professions and Occupations - Office of Barber and Cosmetology Licensure

CCR number

4 CCR 731-1

Rule title

4 CCR 731-1 BARBER AND COSMETOLOGY LICENSURE RULES AND
REGULATIONS 1 - eff 02/15/2024

Effective date

02/15/2024

DEPARTMENT OF REGULATORY AGENCIES

Office of Barber and Cosmetology Licensure

BARBER AND COSMETOLOGY LICENSURE RULES AND REGULATIONS

4 CCR 731-1

[Editor's Notes follow the text of the rules at the end of this CCR Document.]

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Editor's Notes

History

Entire rule eff. 02/14/2018.

Rule 4.2 emer. rule eff. 01/24/2019; expired 05/24/2019.

Rule 4.2 eff. 06/14/2019.

Rule 1.4 eff. 12/15/2020.

Rules 1.4 A, 1.4 B.2-3 eff. 05/30/2021. Rule 1.4 C repealed eff. 05/30/2021.

Rule 1.12 emer. rule eff. 08/15/2022.

Rule 1.4 A, 1.4 B.2-3 eff. 09/14/2022.

Rule 1.12 eff. 11/30/2022.

Rules 1.1 A.4, 1.2 B, 1.4 E, 1.9 E.3.e eff. 08/14/2023.

Annotations

Rules 1.4 A, 1.4 B.2, 1.4 C (adopted 10/21/2020) were not extended by Senate Bill 21-152 and therefore expired 05/15/2021.

Rules 1.12 B. and 1.12 C. (adopted 10/10/2022) were not extended by Senate Bill 23-102 and therefore expired 05/15/2023.

PHIL WEISER
Attorney General
NATALIE HANLON LEH
Chief Deputy Attorney General
SHANNON STEVENSON
Solicitor General

TANJA WHEELER
Associate Chief Deputy Attorney
General



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Office of the Attorney General

Tracking number: 2023-00727

Opinion of the Attorney General rendered in connection with the rules adopted by the
Division of Professions and Occupations - Office of Barber and Cosmetology Licensure

on 12/21/2023

4 CCR 731-1

BARBER AND COSMETOLOGY LICENSURE RULES AND REGULATIONS

The above-referenced rules were submitted to this office on 12/21/2023 as required by section 24-4-103, C.R.S. This office has reviewed them and finds no apparent constitutional or legal deficiency in their form or substance.

January 04, 2024 10:22:26

A blue ink signature of Philip J. Weiser, written in a cursive style.

Philip J. Weiser
Attorney General
by Kurtis Morrison
Deputy Attorney General

Permanent Rules Adopted

Department

Department of Regulatory Agencies

Agency

Division of Professions and Occupations - Office of Outfitters Registration

CCR number

4 CCR 733-1

Rule title

4 CCR 733-1 OUTFITTERS REGISTRATION RULES AND REGULATIONS 1 - eff
02/15/2024

Effective date

02/15/2024

DEPARTMENT OF REGULATORY AGENCIES

Office of Outfitters Registration

OUTFITTERS REGISTRATION RULES AND REGULATIONS

4 CCR 733-1

[Editor's Notes follow the text of the rules at the end of this CCR Document.]

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Editor's Notes

History

Entire rule eff. 10/01/2011.

Entire rule eff. 01/31/2017.

Rule 1.2 D.2 eff. 07/30/2020.

Entire rule eff. 12/15/2020.

Rule 1.5 A.1.b eff. 11/14/2021.

Rule 1.12 emer. rule eff. 08/15/2022.

Rule 1.12 eff. 11/30/2022.

Annotations

Rules 1.12 B. and 1.12 C. (adopted 10/10/2022) were not extended by Senate Bill 23-102 and therefore expired 05/15/2023.

PHIL WEISER
Attorney General
NATALIE HANLON LEH
Chief Deputy Attorney General
SHANNON STEVENSON
Solicitor General

TANJA WHEELER
Associate Chief Deputy Attorney
General



STATE OF COLORADO
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Office of the Attorney General

Tracking number: 2023-00729

Opinion of the Attorney General rendered in connection with the rules adopted by the

Division of Professions and Occupations - Office of Outfitters Registration

on 12/21/2023

4 CCR 733-1

OUTFITTERS REGISTRATION RULES AND REGULATIONS

The above-referenced rules were submitted to this office on 12/21/2023 as required by section 24-4-103, C.R.S. This office has reviewed them and finds no apparent constitutional or legal deficiency in their form or substance.

January 04, 2024 10:43:34

Philip J. Weiser
Attorney General
by Kurtis Morrison
Deputy Attorney General

Permanent Rules Adopted

Department

Department of Regulatory Agencies

Agency

Division of Professions and Occupations - Office of Funeral Home and Crematory Registration

CCR number

4 CCR 742-1

Rule title

4 CCR 742-1 FUNERAL HOME AND CREMATORY REGISTRATION'S RULES AND REGULATIONS 1 - eff 02/15/2024

Effective date

02/15/2024

DEPARTMENT OF REGULATORY AGENCIES

Office of Funeral Home and Crematory Registration

FUNERAL HOME AND CREMATORY REGISTRATION RULES

4 CCR 742-1

[Editor's Notes follow the text of the rules at the end of this CCR Document.]

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Editor's Notes

History

Entire rule eff. 01/01/2010.

Rules 5, 8 eff. 12/30/2016.

Entire rule eff. 07/15/2021.

Rules 1.9 D.2, 1.9 E.2, 1.9 E.3.b emer. rules eff. 09/08/2021.

Rules 1.9 D.2, 1.9 E.2, 1.9 E.3.b eff. 10/30/2021.

Rule 1.7 eff. 08/14/2022.

Rule 1.10 emer. rule eff. 08/15/2022.

Rule 1.10 eff. 11/30/2022.

Annotations

Rules 1.10 B. and 1.10 C. (adopted 10/10/2022) were not extended by Senate Bill 23-102 and therefore expired 05/15/2023.

PHIL WEISER
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SHANNON STEVENSON
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Associate Chief Deputy Attorney
General



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Office of the Attorney General

Tracking number: 2023-00728

Opinion of the Attorney General rendered in connection with the rules adopted by the
Division of Professions and Occupations - Office of Funeral Home and Crematory Registration

on 12/21/2023

4 CCR 742-1

FUNERAL HOME AND CREMATORY REGISTRATION RULES AND REGULATIONS

The above-referenced rules were submitted to this office on 12/21/2023 as required by section 24-4-103, C.R.S. This office has reviewed them and finds no apparent constitutional or legal deficiency in their form or substance.

January 09, 2024 08:45:45

Philip J. Weiser
Attorney General
by Kurtis Morrison
Deputy Attorney General

Permanent Rules Adopted

Department

Department of Regulatory Agencies

Agency

Division of Professions and Occupations - Office of Radon Professionals

CCR number

4 CCR 754-1

Rule title

4 CCR 754-1 RADON PROFESSIONALS RULES AND REGULATIONS 1 - eff
02/15/2024

Effective date

02/15/2024

DEPARTMENT OF REGULATORY AGENCIES

Office of Radon Professionals

RADON PROFESSIONALS RULES AND REGULATIONS

4 CCR 754-1

[Editor's Notes follow the text of the rules at the end of this CCR Document.]

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Editor's Notes

History

New rule emer. rule eff. 07/01/2022.

Rule 1.14 emer. rule eff. 08/15/2022.

Rules 1.1-1.13 eff. 10/15/2022.

Rule 1.14 eff. 11/30/2022.

Annotations

Rules 1.14 B. and 1.14 C. (adopted 10/07/2022) were not extended by Senate Bill 23-102 and therefore expired 05/15/2023.

PHIL WEISER
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Office of the Attorney General

Tracking number: 2023-00731

Opinion of the Attorney General rendered in connection with the rules adopted by the

Division of Professions and Occupations - Office of Radon Professionals

on 12/21/2023

4 CCR 754-1

RADON PROFESSIONALS RULES AND REGULATIONS

The above-referenced rules were submitted to this office on 12/21/2023 as required by section 24-4-103, C.R.S. This office has reviewed them and finds no apparent constitutional or legal deficiency in their form or substance.

January 08, 2024 09:58:22

Philip J. Weiser
Attorney General
by Kurtis Morrison
Deputy Attorney General

Permanent Rules Adopted

Department

Department of Public Health and Environment

Agency

Air Quality Control Commission

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5 CCR 1001-9 REGULATION NUMBER 7 Control of Emissions from Oil and Gas
Emissions Operations 1 - eff 02/14/2024

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02/14/2024

DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Air Quality Control Commission

REGULATION NUMBER 7

Control of Emissions from Oil and Gas Emissions Operations

5 CCR 1001-9

[Editor's Notes follow the text of the rules at the end of this CCR Document.]

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Pursuant to Colorado Revised Statutes § 24-4-103 (12.5), materials incorporated by reference are available for public inspection during normal business hours, or copies may be obtained at a reasonable cost from the Air Quality Control Commission (the Commission), 4300 Cherry Creek Drive South, Denver, Colorado 80246-1530. The material incorporated by reference is also available through the United States Government Printing Office, online at www.govinfo.gov. Materials incorporated by reference are those editions in existence as of the date indicated and do not include any later amendments.

PART A Applicability and General Provisions

I. Applicability

I.A.

I.A.1. The provisions of this regulation shall apply as follows:

I.A.1.a. All provisions of this regulation apply to the Denver 1-hour ozone attainment/maintenance area, to any nonattainment area for the 1-hour ozone standard, to the 8-hour Ozone Control Area, and to northern Weld County.

I.A.1.b. (State Only) All provisions of this regulation apply to any ozone nonattainment area, which includes areas designated nonattainment for either the 1-hour or 8-hour ozone standard, unless otherwise specified in Section I.A.1.c. Colorado's ozone nonattainment or attainment maintenance area maps and chronologies of attainment status are identified in Appendix A of this regulation.

I.A.1.c. The provisions of Part B, Sections II., III., IV., and V. apply statewide. The provisions of Part B, Sections II., through VIII. and any other sections marked by (State Only) are not federally enforceable, unless otherwise identified.

I.A.2. REPEALED

I.A.3. REPEALED

II. General Provisions

II.A. Definitions

II.A.1. "8-Hour Ozone Control Area" means the Counties of Adams, Arapahoe, Boulder (includes part of Rocky Mountain National Park), Douglas, and Jefferson; the Cities and Counties of Denver and Broomfield; and the following portions of the Counties of Larimer and Weld:

II.A.1.a. For Larimer County (includes part of Rocky Mountain National Park), that portion of the county that lies south of a line described as follows: Beginning at a point on Larimer County's eastern boundary and Weld County's western boundary intersected by 40 degrees, 42 minutes, and 47.1 seconds north latitude, proceed west to a point defined by the intersection of 40 degrees, 42 minutes, 47.1 seconds north latitude and 105 degrees, 29 minutes, and 40.0 seconds west longitude, thence proceed south on 105 degrees, 29 minutes, 40.0 seconds west longitude to the intersection with 40 degrees, 33 minutes and 17.4 seconds north latitude, thence proceed west on 40 degrees, 33 minutes, 17.4 seconds north latitude until this line intersects Larimer County's western boundary and Grand County's eastern boundary.

II.A.1.b. For Weld County, that portion of the county that lies south of a line described as follows: Beginning at a point on Weld County's eastern boundary and Logan County's western boundary intersected by 40 degrees, 42 minutes, 47.1 seconds north latitude, proceed west on 40 degrees, 42 minutes, 47.1 seconds north latitude until this line intersects Weld County's western boundary and Larimer County's eastern boundary.

- II.A.2. "Denver 1-Hour Ozone Attainment/Maintenance Area" means the Counties of Jefferson and Douglas, the Cities and Counties of Denver and Broomfield, Boulder County (excluding Rocky Mountain National Park), Adams County west of Kiowa Creek, and Arapahoe County west of Kiowa Creek.
- II.A.3. "Northern Weld County" means the portion of the county that does not lie south of a line described as follows: Beginning at a point on Weld County's eastern boundary and Logan County's western boundary intersected by 40 degrees, 42 minutes, 47.1 seconds north latitude, proceed west on 40 degrees, 42 minutes, 47.1 seconds north latitude until this line intersects Weld County's western boundary and Larimer County's eastern boundary.
- II.A.4. "Volatile Organic Compound (VOC)" means any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions, except those listed in Section II.B. as having negligible photochemical reactivity. VOC may be measured by a reference method, an equivalent method, an alternative method, or by procedures specified under 40 CFR Part 60 (July 1, 2022). A reference method, an equivalent method, or an alternative method, however, may also measure nonreactive organic compounds. In such cases, an owner or operator may exclude the compounds listed in Section II.B. when determining compliance with a standard if the amount of such compounds is accurately quantified, and such exclusion is approved by the Division. As a precondition to excluding such compounds as VOC, or at any time thereafter, the Division may require an owner or operator to provide monitoring or testing methods and results demonstrating, to the satisfaction of the Division, the amount of negligible-reactive compounds in the source's emissions.

II.B. Exemptions

Emissions of the organic compounds listed as having negligible photochemical reactivity in the common provisions definition of Negligibly Reactive Volatile Organic Compound are exempt from the provisions of this regulation. However, the hydrocarbon threshold in Part B, Section I.L. and natural gas emissions standards in Part B, Sections III.C.1. and III.C.2. are used as indicators for the volatile organic compound emission reduction measures in Part B, Sections I.L., III.C.1., and III.C.2., and are enforceable provisions of this regulation.

(State Only) Notwithstanding the foregoing exemption, hydrocarbon emissions from oil and gas operations, including methane and ethane, are subject to this regulation as set forth in Part B.

II.C. New Sources

All new sources shall utilize controls representing RACT, pursuant to applicable provisions in Regulation Number 7, Regulation Number 24, Regulation Number 25, Regulation Number 26 and Regulation Number 3, Part B, Section III.D., upon commencement of operation.

II.D. Alternative Control Plans and Test Methods

II.D.1. Sources subject to specific requirements of this regulation shall submit for approval as a revision to the State Implementation Plan:

- II.D.1.a. Any alternative emission control plan or compliance method other than control options specifically allowed in the applicable regulation. Such alternative control plans shall provide control equal to or greater than the emission control or reduction required by the regulation, unless the source contends that the control level required by the regulation does not represent RACT for their specific source.

II.D.1.b. Any alternative test method or procedure not specifically allowed in the applicable regulation.

II.D.2. No alternative submitted pursuant to this Section II.D. is effective until the alternative is approved as a revision to the State Implementation Plan.

Appendix A Colorado Ozone Nonattainment or Attainment Maintenance Areas

I. Chronology of Attainment Status

Denver Metropolitan Area Only

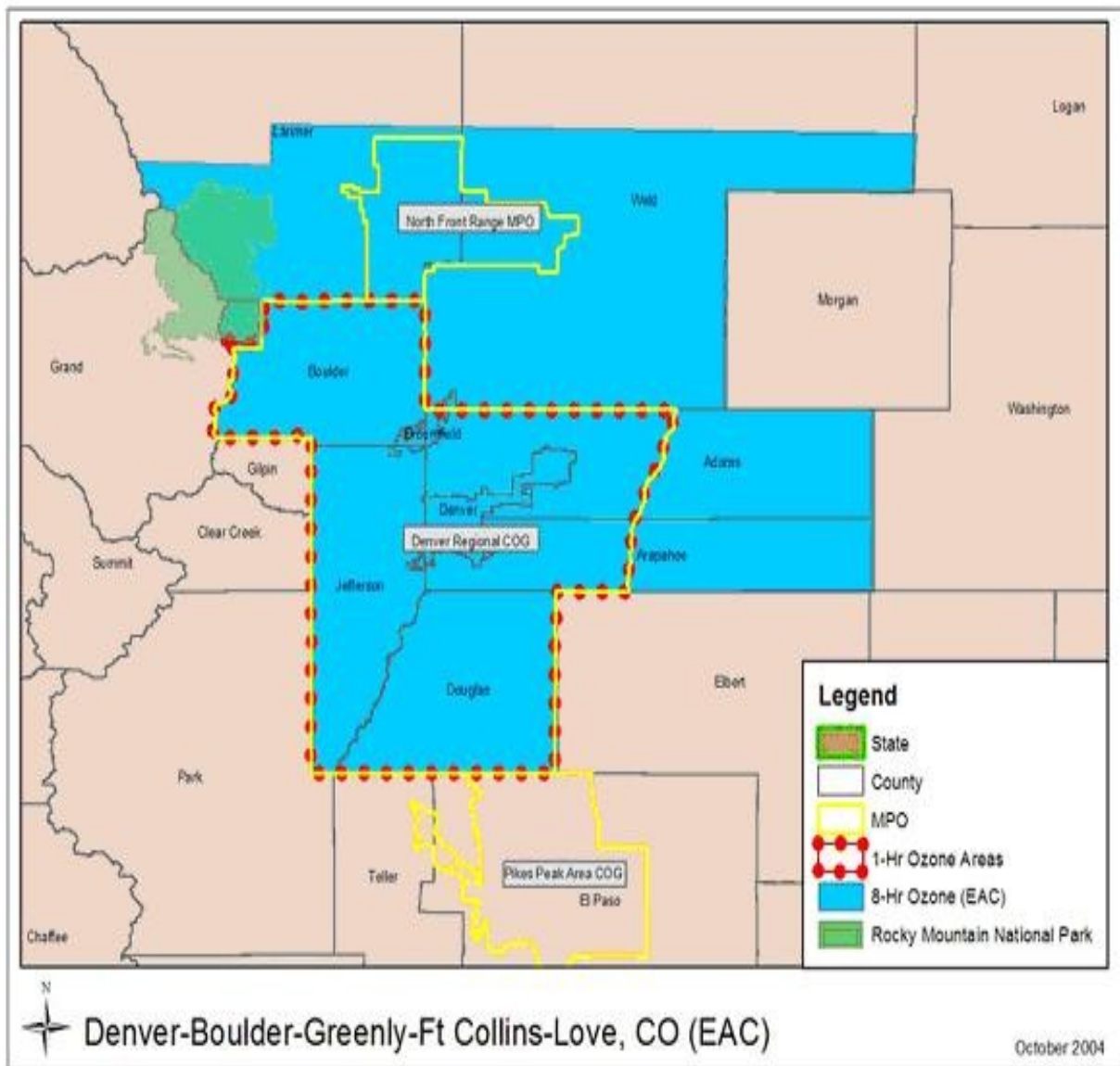
1978	Denver 1-hour Ozone Nonattainment Area designation first becomes effective in 7-county Denver Metropolitan Area
10/11/01	Denver 1-hour Ozone Attainment Maintenance Area designation replaces non-attainment designation and becomes effective in 7-county Denver Metropolitan Area
9/2/05	1-hour Ozone National Ambient Air Quality Standard is Revoked in Colorado except for the Denver 1-hour Ozone Attainment Maintenance Area.

Denver Metropolitan Area and North Front Range

10/11/01	1-hour attainment maintenance area replaces non-attainment designation for the Denver Metro Area/North Front Range Area
4/15/04	EPA designates the Denver Metro Area/North Front Range region as an 8-hour ozone non-attainment area, designation deferred due to the implementation of the Early Action Compact
11/20/07	Denver 8-hour ozone non-attainment designation (1997 NAAQS) becomes effective in 9 county Denver Metropolitan Area
7/20/2012	Denver 8-hour ozone non-attainment designation (2008 NAAQS) becomes effective in 9 county Denver Metropolitan Area
8/3/2018	Denver 8-hour ozone nonattainment designation (2015 NAAQS) becomes effective in 9 county Denver Metropolitan Area
12/31/2021	EPA modification of the 9 county Denver Metropolitan Area 8-hour ozone nonattainment designation (2015 NAAQS) to include the portion of northern Weld County defined in Part A

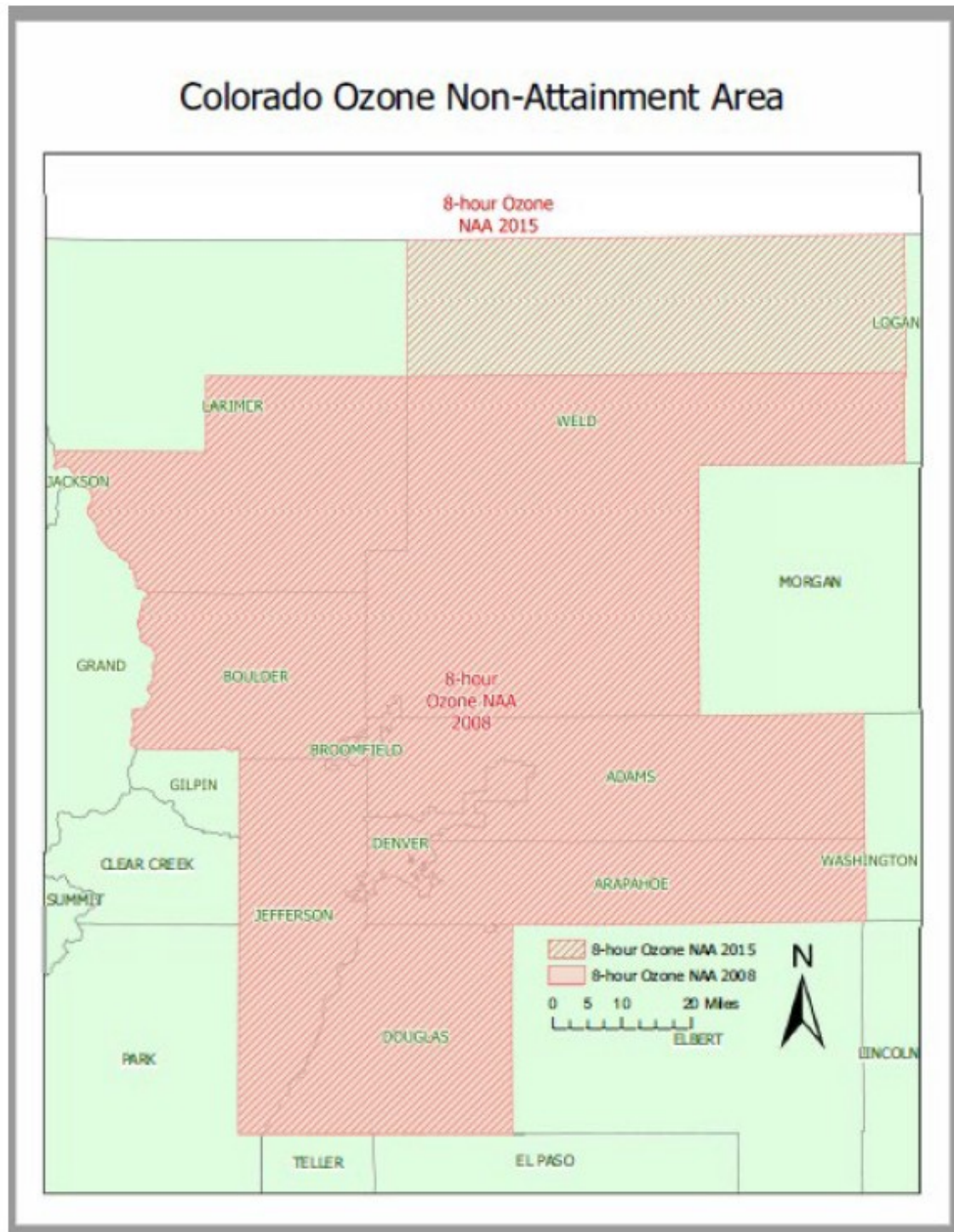
II. Maps

Denver Metropolitan Area and North Front Range (2008 Ozone NAAQS)



Prepared by FHWA - HEPN-40

Denver Metropolitan Area and North Front Range and northern Weld County (2015 ozone NAAQS)



PART B Oil and Natural Gas Operations

I. Volatile Organic Compound Emissions from Oil and Gas Operations

I.A. Applicability

- I.A.1. Except as provided in Section I.A.4., this section applies to oil and gas operations that collect, store, or handle hydrocarbon liquids or produced water in the 8-hour Ozone Control Area and that are located at or upstream of a natural gas plant.
- I.A.2. Except as provided in Section I.A.4., beginning February 14, 2023, this section applies to oil and gas operations that collect, store, or handle hydrocarbon liquids or produced water in northern Weld County and that are located at or upstream of a natural gas plant.
- I.A.3. Beginning February 14, 2023, this section applies to centralized oil stabilization facilities that emit or have the potential to emit VOC emissions greater than or equal to 25 tpy as of November 7, 2022, located in the 8-Hour Ozone Control Area.
- I.A.4. Beginning February 14, 2023, Sections I.B. through I.F. and I.M. apply to class II disposal well facilities that emit or have the potential to emit VOC emissions greater than or equal to 25 tpy as of November 7, 2022, located in the 8-Hour Ozone Control Area.
- I.A.5. Oil refineries are not subject to Section I.

I.B. Definitions specific to Section I.

- I.B.1. “Affected Operations” means oil and gas exploration and production operations, natural gas compressor stations and natural gas drip stations, to which Section I. applies.
- I.B.2. “Air Pollution Control Equipment”, as used in Section I., means a combustion device or vapor recovery unit. Air pollution control equipment also means alternative emissions control equipment, pollution prevention devices, and processes that comply with the requirements of Section I.D.4. that are approved by the Division.
- I.B.3. “Approved Instrument Monitoring Method” means an infra-red camera, EPA Method 21, or other instrument based monitoring method or program approved in accordance with Section I.L.8. If an owner or operator elects to use Division approved continuous emission monitoring, the Division may approve a streamlined inspection, recordkeeping, and reporting program for such operations.
- I.B.4. “Atmospheric Storage Tanks or Atmospheric Condensate Storage Tanks” means a type of condensate storage tank that vents, or is designed to vent, to the atmosphere.
- I.B.5. “Auto-Igniter” means a device which will automatically attempt to relight the pilot flame in the combustion chamber of a control device in order to combust volatile organic compound emissions.
- I.B.6. “Calendar Week” means a week beginning with Sunday and ending with Saturday.

- I.B.7. "Class II Disposal Well Facility" means a facility that injects underground fluids which are brought to the surface in connection with natural gas storage operations or oil or natural gas production and that may be commingled with waste waters from gas plants which are an integral part of production operations, unless those waters are classified as a hazardous waste at the time of injection. Class II disposal well facilities do not include wells which inject fluids for enhanced recovery of oil or natural gas or for storage of hydrocarbons which are liquid at standard temperature and pressure.
- I.B.8. "Commencement of Operation" means when a source first conducts the activity that it was designed and permitted for. In addition, for oil and gas well production facilities, commencement of operation is the date any permanent production equipment is in use and product is consistently flowing to sales lines, gathering lines, or storage tanks from the first producing well at the stationary source, but no later than end of well completion operations (including flowback).
- I.B.9. "Condensate Storage Tank" means any tank or series of tanks that store condensate and are either manifolded together or are located at the same well pad.
- I.B.10. "Centralized Oil Stabilization Facility" means a facility that receives high-vapor-pressure crude oil (post-separation) from well production facilities through a pipeline oil-gathering system and stabilizes the crude oil for storage in tanks and/or for pipeline transportation.
- I.B.11. "Centrifugal Compressor" means any machine used for raising the pressure of natural gas by drawing in low pressure natural gas and discharging significantly higher pressure natural gas by means of mechanical rotating vanes or impellers. Screw, sliding vane, and liquid ring compressors are not centrifugal compressors.
- I.B.12. "Component" means each pump seal, flange, pressure relief device (including thief hatches or other openings on a controlled storage tank), connector, and valve that contains or contacts a process stream with hydrocarbons, except for components in process streams consisting of glycol, amine, produced water, or methanol.
- I.B.13. "Connector" means flanged, screwed, or other joined fittings used to connect two pipes or a pipe and a piece of process equipment or that close an opening in a pipe that could be connected to another pipe. Joined fittings welded completely around the circumference of the interface are not considered connectors.
- I.B.14. "Custody Transfer" means the transfer of crude oil or natural gas after processing and/or treatment in the producing operations or from storage vessels or automatic transfer facilities or other such equipment, including product loading racks, to pipelines or any other forms of transportation.
- I.B.15. "Downtime" means the period of time when a well is producing and the air pollution control equipment is not in operation.
- I.B.16. "Existing" means any atmospheric condensate storage tank that began operation before February 1, 2009, and has not since been modified.
- I.B.17. "Glycol Natural Gas Dehydrator" means any device in which a liquid glycol (including, ethylene glycol, diethylene glycol, or triethylene glycol) absorbent directly contacts a natural gas stream and absorbs water.
- I.B.18. "Hydrocarbon liquids" means any naturally occurring, unrefined petroleum liquid. Hydrocarbon liquids does not include produced water.

- I.B.19. "Infra-red Camera" means an optical gas imaging instrument designed for and capable of detecting hydrocarbons.
- I.B.20. "Modified or Modification" means any physical change or change in operation of a stationary source that results in an increase in actual uncontrolled volatile organic compound emissions from the previous calendar year that occurs on or after February 1, 2009. For atmospheric condensate storage tanks (and beginning March 1, 2020, for all storage tanks), a physical change or change in operation includes but is not limited to drilling wells and recompleting, refracturing or otherwise stimulating existing wells.
- I.B.21. "Natural Gas Compressor Station" means a facility, located downstream of well production facilities, which contains one or more compressors designed to compress natural gas from well pressure to gathering system pressure prior to the inlet of a natural gas processing plant.
- I.B.22. "Natural Gas-Driven Diaphragm Pump" means a positive displacement pump powered by pressurized natural gas that uses the reciprocating action of flexible diaphragms in conjunction with check valves to pump a fluid. A pump in which a fluid is displaced by a piston driven by a diaphragm is not considered a diaphragm pump. A lean glycol circulation pump that relies on energy exchange with the rich glycol from the contactor is not considered a diaphragm pump.
- I.B.23. "Natural Gas Processing Plant" means any processing site engaged in the extraction of natural gas liquids from field gas, fractionation of mixed natural gas liquids to natural gas products, or both. A Joule-Thompson valve, a dew point depression valve, or an isolated or standalone Joule-Thompson skid is not a natural gas processing plant.
- I.B.24. "New" means any atmospheric condensate storage tank that began operation on or after February 1, 2009.
- I.B.25. "Northern Weld County" means the portion of the county that does not lie south of a line described as follows: Beginning at a point on Weld County's eastern boundary and Logan County's western boundary intersected by 40 degrees, 42 minutes, 47.1 seconds north latitude, proceed west on 40 degrees, 42 minutes, 47.1 seconds north latitude until this line intersects Weld County's western boundary and Larimer County's eastern boundary.
- I.B.26. "Produced Water" means water that is extracted from the earth from an oil or natural gas production well, or that is separated from crude oil, condensate, or natural gas after extraction.
- I.B.27. "Reciprocating Compressor" means a piece of equipment that increases the pressure of process gas by positive displacement, employing linear movement of the piston rod.
- I.B.28. "Stabilized" when used to refer to stored hydrocarbon liquids, means that the hydrocarbon liquids have reached substantial equilibrium with the atmosphere and that any emissions that occur are those commonly referred to within the industry as "working and breathing losses".
- I.B.29. "Storage tank" means any fixed roof storage vessel or series of storage vessels that are manifolded together via liquid line. Storage tanks may be located at a well production facility or other location.

- I.B.30. "Storage vessel" means a tank or other vessel that contains an accumulation of hydrocarbon liquids or produced water and is constructed primarily of nonearthed materials (such as wood, concrete, steel, fiberglass, or plastic) which provide structural support. A well completion vessel that receives recovered liquids from a well after commencement of operation for a period which exceeds 60 days is considered a storage vessel. Storage vessel does not include vessels that are skid-mounted or permanently attached to something that is mobile (such as trucks, railcars, barges, or ships) and are intended to be located at the site for less than 180 consecutive days; process vessels such as surge control vessels, bottom receivers, or knockout vessels; or pressure vessels designed to operate in excess of 204.9 kilopascals and without emissions to the atmosphere.
- I.B.31. (State Only) "Surveillance System" means monitoring pilot flame presence or temperature in a combustion device either by visual observation or with an electronic device to record times and duration of periods where a pilot flame is not detected at least once per day.
- I.B.32. "System-Wide Control Strategy" means the collective emissions and emission reductions from all atmospheric condensate storage tanks under common ownership within the 8-hour Ozone Control Area for which uncontrolled actual volatile organic compound emissions are equal to or greater than two tons per year.
- I.B.33. "Well Production Facility" means all equipment at a single stationary source directly associated with one or more oil wells or natural gas wells upstream of the natural gas processing plant. This equipment includes, but is not limited to, equipment used for storage, separation, treating, dehydration, artificial lift, combustion, compression, pumping, metering, monitoring, and flowline.
- I.C. General Provisions
 - I.C.1. General Requirements
 - I.C.1.a. All air pollution control equipment used to demonstrate compliance with this Section I. must be operated and maintained consistent with manufacturer specifications and good engineering and maintenance practices. The owner or operator must keep manufacturer specifications on file. In addition, all such air pollution control equipment must be adequately designed and sized to achieve the control efficiency rates required by this Section I. and to handle reasonably foreseeable fluctuations in emissions of volatile organic compounds. Fluctuations in emissions that occur when the separator dumps into the tank are reasonably foreseeable.
 - I.C.1.b. All hydrocarbon liquids and produced water collection, storage, processing, and handling operations, regardless of size, must be designed, operated, and maintained so as to minimize emission of volatile organic compounds to the atmosphere to the maximum extent practicable.
 - I.C.1.c. All air pollution control equipment used to demonstrate compliance with Sections I.D., I.J., and I.K. must meet a control efficiency of at least 95%. Failure to properly install, operate, and maintain air pollution control equipment is a violation of this regulation.

- I.C.1.d. If a flare or other combustion device is used to control emissions of volatile organic compounds to comply with Sections I.D., I.J., and I.K. it must be enclosed, have no visible emissions, and be designed so that an observer can, by means of visual observation from the outside of the enclosed flare or combustion device, or by other convenient means, such as a continuous monitoring device, approved by the Division, determine whether it is operating properly.
- I.C.1.e. All combustion devices used to control emissions of volatile organic compounds to comply with Sections I.D., I.J., and I.K. must be equipped with and operate an auto-igniter as follows:
- I.C.1.e.(i) (State Only) For condensate storage tanks that are constructed or modified after May 1, 2009, and before January 1, 2017, and controlled by a combustion device, auto-igniters must be installed and operational, beginning the date of first production after any new tank installation or tank modification.
 - I.C.1.e.(ii) (State Only) For all existing condensate storage tanks controlled by a combustion device in order to comply with the emissions control requirements of Section I.D.1., auto-igniters must be installed and operational beginning May 1, 2009, for condensate storage tanks with actual uncontrolled emissions of greater than or equal to 50 tons per year, and beginning May 1, 2010, for all other existing condensate storage tanks controlled by a combustion device, or within 180 days from first having installed the combustion device, whichever date comes later.
 - I.C.1.e.(iii) All combustion devices installed on or after January 1, 2017, must be equipped with an operational auto-igniter upon installation of the combustion device.
 - I.C.1.e.(iv) All combustion devices installed on or after January 1, 2018, and used to comply with Sections I.J. or I.K. must be equipped with an operational auto-igniter upon installation of the combustion device.
- I.C.1.f. (State Only) If a combustion device is used to control emissions of volatile organic compounds, surveillance systems must be employed and operational as follows:
- I.C.1.f.(i) (State Only) Beginning May 1, 2010, for all existing condensate storage tanks with uncontrolled actual emissions of 100 tons per year or more based on data from the previous twelve consecutive months.

- I.C.1.f.(ii) (State Only) For all new and modified condensate storage tanks controlled by a combustion device for the first 90 days surveillance systems must be employed and operational beginning 180 days from commencement of operation after the tank was newly installed, or after the well was newly drilled, re-completed, re-fractured or otherwise stimulated, if uncontrolled actual emissions projected for the first twelve months based on data from the first 90 days of operation from the condensate storage tank are 100 tons or more of uncontrolled VOCs.
- I.C.2. The emission estimates and emission reductions required by Section I.D. must be demonstrated using one of the following emission factors:
- I.C.2.a. In the 8-Hour Ozone Control Area
- I.C.2.a.(i) For atmospheric condensate storage tanks at oil and gas exploration and production operations, a default emission factor of 13.7 pounds of volatile organic compounds per barrel of condensate must be used unless a more specific emission factor has been established pursuant to Section I.C.2.a.(iii). The Division may require a more specific emission factor that complies with Section I.C.2.a.(iii).
- I.C.2.a.(ii) For atmospheric condensate storage tanks at natural gas compressor stations and natural gas drip stations a source may use a specific emissions factor that was used for reporting emissions from the source on APENs filed on or before February 28, 2003. The Division may, however, require the source to develop and use a more recent specific emission factor pursuant to Section I.C.2.a.(iii) if such a more recent emission factor would be more reliable or accurate.
- I.C.2.a.(iii) Except as otherwise provided in Section I.C.2.a.(i), a specific emission factor is one for which the Division has no objection, and which is based on collection and analysis of a representative sample of the hydrocarbon liquids or produced water pursuant to a test method approved by the Division.
- I.C.2.a.(iv) For storage tanks storing produced water or hydrocarbon liquids other than condensate, the most recent Division-approved default emission factors must be used unless a more specific emission factor has been established pursuant to Section I.C.2.a.(iii).
- I.C.2.a.(v) If the Division has reason to believe that a specific emission factor is no longer representative, or if it deems it otherwise necessary, the Division may require the use of an alternative emission factor that complies with Section I.C.2.a.(iii).
- I.C.2.b. (State Only) For any other Ozone Nonattainment Area or Attainment/Maintenance Areas

- I.C.2.b.(i) (State Only) For storage tanks at oil and gas exploration and production operations, the source must use a default basin-specific uncontrolled volatile organic compound emission factor established by the Division unless a site-specific emission factor has been established pursuant to Section I.C.2.b.(iii). If the Division has established no default emission factor, if the Division has reason to believe that the default emission factor is no longer representative, or if it deems it otherwise necessary, the Division may require use of an alternative emission factor that complies with Section I.C.2.b.(iii).
- I.C.2.b.(ii) (State Only) For storage tanks at natural gas compressor stations and natural gas drip stations, the source must use a site-specific volatile organic compound emission factor established pursuant to Section I.C.2.b.(iii). If the Division has reason to believe that the site-specific emission factor is no longer representative, or if it deems it otherwise necessary, the Division may require use of an alternative emission factor that complies with Section I.C.2.b.(iii).
- I.C.2.b.(iii) (State Only) Establishment of or Updating Approved Emission Factors
 - I.C.2.b.(iii)(A) (State Only) The Division may require the source to develop and/or use a more recent default basin-specific or site-specific volatile organic compound emission factor pursuant to Section I.C.2.b., if such emission factor would be more reliable or accurate.
 - I.C.2.b.(iii)(B) (State Only) For storage tanks at oil and gas exploration and production operations, the source may use a site-specific volatile organic compound emission factor for which the Division has no objection, and which is based on collection and analysis of a representative sample of hydrocarbon liquids or produced water pursuant to a test method approved by the Division.
 - I.C.2.b.(iii)(C) (State Only) For storage tanks at natural gas compressor stations and natural gas drip stations, a source may use a volatile organic compound emissions factor that was used for reporting emissions from the source on APENs filed on or before February 28, 2003, or an alternative site-specific volatile organic compound emission factor established pursuant to Section I.C.2.b.
 - I.C.2.b.(iii)(D) (State Only) A default basin-specific volatile organic compound emissions factor must be one for which the Division has no objection, and which is based on collection and analysis of a representative sample of hydrocarbon liquids or produced water or an alternative method, pursuant to a test method approved by the Division, except as otherwise provided in I.C.2.b.(i).

- I.C.2.b.(iii)(E) (State Only) A site-specific volatile organic compound emissions factor must be one for which the Division has no objection, and which is based on collection and analysis of a representative sample of hydrocarbon liquids or produced water pursuant to a test method approved by the Division.

I.D. Storage Tank Emission Controls

I.D.1. Repealed (December 16, 2022)

I.D.2. Repealed (December 16, 2022)

I.D.3. Storage Tank Control Strategy

I.D.3.a. Applicability

- I.D.3.a.(i) Owners or operators of storage tanks with uncontrolled actual emissions of VOCs equal to or greater than four (4) tons per year based on a rolling twelve-month total must collect and control emissions from each storage tank by routing emissions to and operating air pollution control equipment that achieves a VOC control efficiency of 95%. If a combustion device is used, it must have a design destruction efficiency of at least 98% for VOC, except where the combustion device has been authorized by permit prior to March 1, 2020.
- I.D.3.a.(ii) Owners or operators of storage tanks with uncontrolled actual emissions of VOCs equal to or greater than two (2) tons per year based on a rolling twelve-month total and not subject to Section I.D.3.a.(i) must collect and control emissions from each storage tank by routing emissions to and operating air pollution control equipment that achieves a VOC control efficiency of 95%. If a combustion device is used, it must have a design destruction efficiency of at least 98% for VOC, except where the combustion device has been authorized by permit prior to March 1, 2020.
- I.D.3.a.(iii) Internal floating roof tanks subject to Part B, Section IV. at centralized oil stabilization facilities are not subject to Section I.D.3.
- I.D.3.a.(iv) Owners or operators of storage tanks at class II disposal well facilities for which the use of air pollution control equipment would be technically infeasible without supplemental fuel may apply for an exemption from the control requirements of Section I.D.3. Such request must include documentation demonstrating the infeasibility of the air pollution control equipment.

I.D.3.b. Compliance Deadlines

Sections I.D.3.b.(i) through I.D.3.b.(viii) do not apply to storage tanks in northern Weld County or at a centralized oil stabilization or class II disposal well facility specified in Sections I.A.3. or I.A.4.

- I.D.3.b.(i) A storage tank subject to Section I.D.3.a.(i) and constructed on or after March 1, 2020, must be in compliance by commencement of operation of that storage tank.
- I.D.3.b.(ii) A storage tank subject to Section I.D.3.a.(ii) and constructed on or after March 1, 2020, must be in compliance by commencement of operation of that storage tank.
- I.D.3.b.(iii) A storage tank subject to Section I.D.3.a.(i) and constructed before March 1, 2020, must be in compliance by May 1, 2020, or by commencement of operation of the storage tank, whichever comes later.
- I.D.3.b.(iv) A storage tank subject to Section I.D.3.a.(ii) and constructed before March 1, 2020, must be in compliance by May 1, 2020, or by commencement of operation of the storage tank, whichever comes later.
- I.D.3.b.(v) A storage tank subject to Section I.D.3.a.(i) and not otherwise subject to Sections I.D.3.b.(i). or I.D.3.b.(iii) that increases uncontrolled actual emissions to four (4) tons per year VOC or more on a rolling twelve-month basis after March 1, 2020, must be in compliance within sixty (60) days of the first day of the month after which the storage tank VOC emissions exceeded four (4) tons per year on a rolling twelve-month basis.
- I.D.3.b.(vi) A storage tank subject to Section I.D.3.a.(ii) and not otherwise subject to Sections I.D.3.b.(ii) or I.D.3.b.(iv) that increases uncontrolled actual emissions to two (2) tons per year VOC based on a rolling twelve-month basis after March 1, 2020, must be in compliance within sixty (60) days of the first day of the month after which the storage tank VOC emissions exceeded two (2) tons per year on a rolling twelve-month basis.
- I.D.3.b.(vii) If air pollution control equipment is not installed by the applicable compliance date in Sections I.D.3.b.(iii) or I.D.3.b.(v), compliance with Section I.D.3.a.(i) may alternatively be demonstrated by shutting in all wells producing into that storage tank by the date in Sections I.D.3.b.(iii) or I.D.3.b.(v) so long as production does not resume from any such well until the air pollution control equipment is installed and operational.
- I.D.3.b.(viii) If air pollution control equipment is not installed by the applicable compliance date in Sections I.D.3.b.(iv) or I.D.3.b.(vi), compliance with Section I.D.3.a.(ii) may alternatively be demonstrated by shutting in all wells producing into that storage tank by the date in Sections I.D.3.b.(iv) or I.D.3.b.(vi) so long as production does not resume from any such well until the air pollution control equipment is installed and operational.
- I.D.3.b.(ix) This Section I.D.3. does not apply to storage tanks at natural gas-processing plants subject to Section I.G. or qualifying natural gas compressor stations subject to Section I.I.

- I.D.3.b.(x) A storage tank in northern Weld County at a centralized oil stabilization or class II disposal well facility specified in Sections I.A.3. or I.A.4. meeting the applicability in Sections I.D.3.a.(i) or I.D.3.a.(ii) and constructed before February 14, 2023, that is not already controlled under Section II.C.1.c. must be in compliance by May 1, 2023.
 - I.D.3.b.(xi) A storage tank in northern Weld County at a centralized oil stabilization or class II disposal well facility specified in Sections I.A.3. or I.A.4. meeting the applicability in Sections I.D.3.a.(i) or I.D.3.a.(ii) and constructed on or after February 14, 2023, must be in compliance by commencement of operation.
 - I.D.3.b.(xii) A storage tank in northern Weld County at a centralized oil stabilization or class II disposal well facility specified in Sections I.A.3. or I.A.4. meeting the applicability in Sections I.D.3.a.(i) or I.D.3.a.(ii) that increases uncontrolled actual emissions to two (2) tons per year VOC based on a rolling twelve-month basis after February 14, 2023, must be in compliance within sixty (60) days of the first day of the month after which the storage tank VOC emissions exceeded two (2) tons per year on a rolling twelve-month basis.
 - I.D.3.b.(xiii) If air pollution control equipment is not installed by the applicable compliance date in Sections I.D.3.b.(x) through I.D.3.b.(xii), compliance with Sections I.D.3.a.(i) or I.D.3.a.(ii) may alternatively be demonstrated by shutting in all wells producing into that storage tank by the date in Sections I.D.3.b.(x) through I.D.3.b.(xii) so long as production does not resume from any such well until the air pollution control equipment is installed and operational.
- I.D.4. Alternative emissions control equipment and pollution prevention devices and processes installed and implemented after June 1, 2004, shall qualify as air pollution control equipment, and may be used in lieu of, or in combination with, combustion devices and/or vapor recovery units to achieve the emission reductions required by this Section I.D., if the following conditions are met:
- I.D.4.a. The owner or operator obtains a construction permit authorizing such use of the alternative emissions control equipment or pollution prevention device or process. The proposal for such equipment, device or process shall comply with all regulatory provisions for construction permit applications and shall include the following:
 - I.D.4.a.(i) A description of the equipment, device or process;
 - I.D.4.a.(ii) A description of where, when and how the equipment, device or process will be used;
 - I.D.4.a.(iii) The claimed control efficiency and supporting documentation adequate to demonstrate such control efficiency;
 - I.D.4.a.(iv) An adequate method for measuring actual control efficiency; and

I.D.4.a.(v) Description of the records and reports that will be generated to adequately track emission reductions and implementation and operation of the equipment, device or process, and a description of how such matters will be reflected in the records and reports required by Section I.F.

I.D.4.b. Public notice of the application is provided pursuant to Regulation Number 3, Part B, Section III.C.4.

I.D.4.c. EPA approves the proposal. The Division shall transmit a copy of the permit application and any other materials provided by the applicant, all public comments, all Division responses and the Division's permit to EPA Region 8. If EPA fails to approve or disapprove the proposal within 45 days of receipt of these materials, EPA shall be deemed to have approved the proposal.

I.E. Monitoring of Storage Tanks and Air Pollution Control Equipment

I.E.1. Applicability

I.E.1.a. The owner or operator of any storage tank that is being controlled pursuant to this Section I.

I.E.2. Monitoring Requirements

I.E.2.a. The owner or operator of any storage tank controlled by air pollution control equipment other than a combustion device must follow manufacturer's recommended maintenance. Air pollution control equipment must be periodically inspected to ensure proper maintenance and operation according to the Division-approved operation and maintenance plan.

I.E.2.b. Repealed (December 16, 2022)

I.E.2.c. Weekly Monitoring Requirements

The owner or operator must inspect or monitor the air pollution control equipment at least weekly to ensure that it is operating properly. The inspection must include and document the following:

I.E.2.c.(i) For combustion devices, a check that the pilot light is lit by either visible observation or other means approved by the Division. For devices equipped with an auto-igniter, a check that the auto-igniter is properly functioning.

I.E.2.c.(ii) For combustion devices, a check that the valves for piping of gas to the pilot light are open.

I.E.2.c.(iii) (State Only) In addition to complying with Sections I.E.2.c.(i). and I.E.2.c.(ii)., the owner or operator of tanks controlled pursuant to Section I.D. that have installed combustion devices may use a surveillance system to maintain records on combustion device operation.

I.E.2.c.(iv) For combustion devices, the owner or operator must visually check for the presence or absence of smoke and that the burner tray is not visibly clogged.

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- I.E.2.c.(v) For vapor recovery units, the owner or operator must check that the unit is operating and that vapors from the storage tank are being routed to the unit.
- I.E.2.c.(vi) For all control devices, the owner or operator must check that the valves for the piping from the storage tank to the air pollution control equipment are open.
- I.E.2.c.(vii) For all storage tanks, the owner or operator must check that the thief hatch is closed and latched, the pressure relief valve is properly seated, and all vent lines are closed.
- I.E.2.c.(viii) Beginning May 1, 2020, or the applicable compliance date in Section I.D.3.b., whichever comes later, owners or operators of storage tanks with uncontrolled actual emissions of VOCs equal to or greater than four (4) tons per year based on a rolling twelve-month total must conduct audio, visual, olfactory (AVO) inspections of the storage tank.
- I.E.2.c.(ix) Beginning May 1, 2020, or the applicable compliance date in Section I.D.3.b., whichever comes later, owners or operators of storage tanks subject to Section I.D.3.a.(ii) must conduct audio, visual, olfactory (AVO) inspections of the storage tank.
- I.E.2.d. (State Only) For storage tanks equipped with a surveillance system or other Division-approved monitoring system, the owner or operator must check weekly that the system is functioning properly and that necessary information is being collected. Any loss of data or failure to collect required data may be treated by the Division as if the data were not collected.
- I.E.3. Performance testing requirements
- I.E.3.a. Each storage vessel that has the potential for VOC emissions equal to or greater than six (6) tons per year (controlled actual emissions) must conduct periodic performance testing of the control device used to comply with Section I.D.3.a.(i). The potential for VOC emissions must be calculated using a generally accepted model or calculation methodology, based on the maximum average daily throughput determined for the 30-day period of production prior to May 1, 2022, or April 1, 2023, if located in northern Weld County. The determination may take into account requirements under a legally and practically enforceable limit in an operating permit or other requirement established under a federal, state, local, or tribal authority. Any vapor from the storage vessel that is recovered and routed to a process through a VRU with a cover and closed vent system is not required to be included in the determination of VOC potential to emit for purposes of determining applicability.
- I.E.3.a.(i) Conduct a performance test in accordance with 40 CFR Part 60, Subpart OOOOa, Section 60.5413a(b) (June 3, 2016) by May 1, 2023, and subsequent performance tests no longer than 60 months following the previous performance test.

- I.E.3.a.(ii) Control device models tested in accordance with 40 CFR Part 60, Subpart OOOOa, Section 60.5413a(d) and demonstrating continuous compliance in accordance with 40 CFR Part 60, Subpart OOOOa, Section 60.5413a(e)(1) (June 3, 2016) are not subject to the performance test requirement in Section I.E.3.a.(i).
- I.E.3.a.(iii) Maintain records of performance tests conducted pursuant to Section I.E.3.a.(i) or manufacturer demonstrations and associated inlet gas flow rate records specified in Section I.E.3.a.(ii) for five (5) years and make records available to the Division upon request.

I.F. Storage Tank Recordkeeping and Reporting

- I.F.1. Repealed, except for records retained in Sections I.F.1.c. through I.F.1.f. and I.F.1.g.(x); renumbered as I.F.1.a. through I.F.1.e., respectively. (December 16, 2022)
 - I.F.1.a. A copy of each calendar weekly and calendar monthly spreadsheet shall be retained for five years, with final retention period ending April 30, 2025. A spreadsheet may apply to more than one week if there are no changes in any of the required data and the spreadsheet clearly identifies the weeks it covers. The spreadsheet may be retained electronically. However, the Division may treat any loss of data or failure to maintain the Division-approved spreadsheet, as if the data were not collected.
 - I.F.1.b. Each owner or operator shall maintain records of the inspections required pursuant to Section I.E. and retain those records for five years, with final retention period ending April 30, 2025. These records shall include the time and date of the inspection, the person conducting the inspection, a notation that each of the checks required under Sections I.C. and I.E. were completed and a description of any problems observed during the inspection, and a description and date of any corrective actions taken.
 - I.F.1.c. (State Only) Each owner or operator shall maintain records of required surveillance system or other monitoring data and shall make these records available promptly upon Division request.
 - I.F.1.d. (State Only) Each owner or operator shall maintain records on when an atmospheric condensate storage tank is newly installed, or when a well is newly drilled, re-completed, re-fractured or otherwise stimulated. Records shall be maintained per well associated with each tank and the date of first production associated with these activities.
 - I.F.1.e. A copy of each semi-annual report shall be retained for five years or through August 30, 2025, for the last report submitted on or before August 30, 2020.
- I.F.2. Recordkeeping for storage tanks subject to Section I.D.3.
 - I.F.2.a. The owner or operator of any storage tank subject to control pursuant to Section I.D.3. must maintain records and make them available to the Division upon request.
 - I.F.2.b. Records maintained under this Section I.F.2. must include:

- I.F.2.b.(i) The AIRS number for the storage tank. The AIRS number assigned by the Division must be marked on all storage tanks required to file an APEN.
- I.F.2.b.(ii) If air pollution control equipment is required to comply with Section I.D.3. visible signage must be located with the control equipment identifying the AIRS number for each storage tank that is being controlled by that equipment.
- I.F.2.b.(iii) Records of the inspections required in Section I.E.
 - I.F.2.b.(iii)(A) The time and date of each inspection.
 - I.F.2.b.(iii)(B) The person conducting the inspection.
 - I.F.2.b.(iii)(C) A notation that each of the checks required under Section I.E. were completed.
 - I.F.2.b.(iii)(D) A description of any problems observed during the inspection, description and date of any corrective actions taken, and name of individual performing corrective actions.
- I.F.2.b.(iv) The calendar monthly uncontrolled actual and controlled actual emissions of VOC and the rolling twelve-month totals for each storage tank subject to control under Section I.D.3.
- I.F.2.b.(v) The emission factor used for each storage tank. The emission factors must comply with Section I.C.2. and the owner or operator must use the most recent emission factor on file with the Division (i.e., either the default emission factor or the specific emission factor established pursuant to Section I.C.2.a.(iii)).
- I.F.2.b.(vi) The control efficiency of each unit of air pollution control equipment and the AIRS number of the storage tank being controlled.
- I.F.2.b.(vii) Records of any exemption, and associated documentation, applied for under Section I.D.3.a.(ii)(A).
- I.F.2.c. (State Only) The owner or operator of each storage tank subject to Section I.D.3. (except storage tanks located at centralized oil stabilization and class II disposal well facilities specified in Section I.A.4.) must maintain records of
 - I.F.2.c.(i) The monthly production volumes for each storage tank, based on the most recent measurement available. The monthly average must be calculated by averaging the most recent measurement of such production, which may be the amount shown on the receipt from the purchaser for delivery of hydrocarbon liquids or produced water from such tank, over the time such delivered hydrocarbon liquids or produced water was collected. The monthly average from the most recent measurement will be used to estimate monthly volumes of controlled and uncontrolled actual emissions for all weeks and months following the measurement until the next measurement is taken.

- I.F.2.c.(ii) Any downtime of air pollution control equipment, including the date, time and duration of any scheduled downtime. For any unscheduled downtime, the date and time the downtime was discovered and the date and time the air pollution control equipment was last observed to be operating.
 - I.F.2.c.(iii) Any required surveillance system or other monitoring data.
 - I.F.2.c.(iv) When a storage tank is installed, or when a well is drilled, re-completed, re-fractured, or otherwise stimulated. Records must be maintained per well associated with each storage tank and the date of commencement of operation associated with these activities.
- I.F.3. Reporting for storage tanks subject to Section I.D.3.
 - I.F.3.a. On or before April 30, 2021, and April 30 of each year thereafter, each owner or operator of storage tanks in the 8-Hour Ozone Control Area must submit a report using Division-approved format. A copy of each report must be retained for a period of five (5) years.
 - I.F.3.b. On or before April 30, 2024, and April 30 of each year thereafter, the owner or operator of any storage tank subject to Sections I.D.3.b.(x) through I.D.3.b.(xii) must submit a report using Division-approved format. A copy of each report must be retained for a period of five (5) years.
 - I.F.3.c. The report under this Section I.F.3. must include:
 - I.F.3.c.(i) The report must list all storage tanks (by AIRS number and location name) controlled pursuant to Section I.D.3. during the previous calendar year (starting calendar year 2020) and
 - I.F.3.c.(i)(A) The calendar monthly uncontrolled actual and controlled actual emissions of VOC and the rolling twelve-month total for each storage tank.
 - I.F.3.c.(i)(B) The emission factor used for each storage tank for each month.
 - I.F.3.c.(i)(C) The control efficiency for the air pollution control equipment for each storage tank.
 - I.F.3.c.(ii) (State Only) The report must identify any storage tank whose control status has changed, and the date of the change, since submission of the previous report.
 - I.F.3.c.(iii) (State Only) The report must list the production volume for each storage tank. Production volumes may be estimated by the amounts shown on the receipt from the purchaser.

- I.F.3.c.(iv) (State Only) The report must list any downtime of air pollution control equipment, including the date, time, and duration of any scheduled downtime. For any unscheduled downtime, the date and time the downtime was discovered and the last date the air pollution control equipment was observed to be operating must be recorded in the report.
 - I.F.3.c.(v) (State Only) The report must list any instances where the air pollution control equipment was not properly functioning, including the date and time the equipment was not properly operating, the date and time the equipment was last observed operating properly, and the date and time the problem was corrected. The report must also include the specific nature of the problem, the specific steps taken to correct the problem, the AIRS number, or site name if no AIRS number has been assigned, of each storage tank being controlled by the equipment and the estimated production from those storage tanks during the period of non-operation.
 - I.F.3.c.(vi) (State Only) Reports must be signed by a responsible official who must also sign the Division-approved compliance certification form for storage tanks. The compliance certification includes both a certification of compliance with all applicable requirements of Section I. If any non-compliance is identified, the certification must include the citation, dates and durations of deviations from this Section I., associated reasoning, and compliance plan and schedule to achieve compliance. Compliance certifications for state only conditions must be identified separately from compliance certifications required under the State Implementation Plan.
 - I.F.3.c.(vii) (State Only) Each Division-approved self-certification form, and compliance certification submitted pursuant to Section I. must contain a certification by a responsible official of the truth, accuracy and completeness of such form, report or certification stating that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.
- I.G. Natural gas-processing plants located in the 8-hour Ozone Control Area or northern Weld County shall comply with requirements of this Section I.G., as well as the requirements of Sections I.B., I.C.1.a., I.C.1.b., I.H., I.J., I.K., and Regulation Number 26, Part B, Section I.A. through C.
- I.G.1. For fugitive volatile organic compound emissions from leaking equipment, the leak detection and repair (LDAR) program as provided at 40 CFR Part 60, Subpart OOOO (July 1, 2017) applies, regardless of the date of construction of the affected facility, unless subject to the LDAR program provided at 40 CFR Part 60, Subpart OOOOa (July 1, 2017).
 - I.G.2. Air pollution control equipment shall be installed and properly operated to reduce emissions of volatile organic compounds from any atmospheric condensate storage tank (or tank battery) used to store condensate that has not been stabilized that has uncontrolled actual emissions of greater than or equal to two tons per year. Such air pollution control equipment shall have a control efficiency of at least 95%.

- I.G.3. Natural gas processing plants within the 8-hour Ozone Control Area constructed before January 1, 2018, must comply with the requirements of Section I.G. beginning January 1, 2019.
- I.G.4. Natural gas processing plants within northern Weld County must comply with the requirements of Section I.G. beginning February 14, 2023, or upon commencement of operation if after February 14, 2023.
- I.G.5. The provisions of Sections I.B., I.C.1.a., I.C.1.b., I.G., I.H., I.J., I.K., and Regulation Number 26, Part B, Section I.A. through C., apply upon the commencement of operations to any natural gas processing plant that commences operation in the 8-Hour Ozone Control Area after the effective date of this section.
- I.H. Emission Reductions from glycol natural gas dehydrators
 - I.H.1. Beginning May 1, 2005, still vents and vents from any flash separator or flash tank on a glycol natural gas dehydrator located at an oil and gas exploration and production operation, natural gas compressor station, drip station or gas-processing plant in the 8-Hour Ozone Control Area and subject to control requirements pursuant to Section I.H.3., shall reduce uncontrolled actual emissions of volatile organic compounds by at least 90 percent on a rolling twelve-month basis through the use of a condenser or air pollution control equipment.
 - I.H.2. (State Only) Beginning January 30, 2009, still vents and vents from any flash separator or flash tank on a glycol natural gas dehydrator located at an oil and gas exploration and production operation, natural gas compressor station, drip station or gas-processing plant in the 8-Hour Ozone Control Area and subject to control requirements pursuant to Section I.H.3., shall reduce uncontrolled actual emissions of volatile organic compounds by at least 90 percent on a rolling twelve-month basis through the use of a condenser or air pollution control equipment.
 - I.H.3. The control requirements of Sections I.H.1. and I.H.2. apply where:
 - I.H.3.a. Actual uncontrolled emissions of volatile organic compounds from the glycol natural gas dehydrator are equal to or greater than one ton per year; and
 - I.H.3.b. The sum of actual uncontrolled emissions of volatile organic compounds from any single glycol natural gas dehydrator or grouping of glycol natural gas dehydrators at a single stationary source is equal to or greater than 15 tons per year. To determine if a grouping of dehydrators meets or exceeds the 15 tons per year threshold, sum the total actual uncontrolled emissions of volatile organic compounds from all individual dehydrators at the stationary source, including those with emissions less than one ton per year.
 - I.H.4. Beginning February 14, 2023, still vents and vents from any flash separator or flash tank on a glycol natural gas dehydrator located at an oil and gas exploration and production operation, natural gas compressor station, drip station or gas-processing plant in northern Weld County and subject to control requirements pursuant to Section I.H.4. that is not already controlled under Section II.D., must reduce uncontrolled actual emissions of volatile organic compounds by at least 95 percent on a rolling twelve-month basis through the use of a condenser or air pollution control equipment. The control requirements of Section I.H.4. apply where:

- I.H.4.a. Uncontrolled actual emissions of VOCs from a glycol natural gas dehydrator constructed on or after February 14, 2023, are equal to or greater than two (2) tons per year. Such glycol natural gas dehydrators must be in compliance with Section I.H.4. by the date that the glycol natural gas dehydrator commences operation.
- I.H.4.b. Uncontrolled actual emissions of VOCs from a single glycol natural gas dehydrator constructed before February 14, 2023, are equal to or greater than six (6) tons per year.
- I.H.5. For purposes of Section I.H., emissions from still vents and vents from any flash separator or flash tank on a glycol natural gas dehydrator shall be calculated using a method approved in advance by the Division.
- I.H.6. Monitoring and recordkeeping
 - I.H.5.a. Beginning January 1, 2017, or February 14, 2023, if located in northern Weld County, owners or operators of glycol natural gas dehydrators subject to the control requirements of Sections I.H.1., I.H.2., or I.H.4. must check on a weekly basis that any condenser or air pollution control equipment used to control emissions of volatile organic compounds is operating properly, and document:
 - I.H.6.a.(i) The date of each inspection;
 - I.H.6.a.(ii) A description of any problems observed during the inspection of the condenser or air pollution control equipment; and
 - I.H.6.a.(iii) A description and date of any corrective actions taken to address problems observed during the inspection of the condenser or air pollution control equipment.
 - I.H.6.b. The owner or operator must check and document on a weekly basis that the pilot light on a combustion device is lit, that the valves for piping of gas to the pilot light are open, and visually check for the presence or absence of smoke.
 - I.H.6.c. The owner or operator must document the maintenance of the condenser or air pollution control equipment, consistent with manufacturer specifications or good engineering and maintenance practices.
 - I.H.6.d. The owner or operator must retain records for a period of five years and make these records available to the Division upon request.
- I.H.7. Reporting
 - I.H.7.a. On or before November 30, 2017, and semi-annually by April 30 and November 30 of each year thereafter, the owner or operator must submit the following information for the preceding calendar year (April 30 report) and for May 1 through September 30 (November 30 report) using Division-approved format. Owners or operators of glycol natural gas dehydrators in northern Weld County must submit the first April 30 report on or before April 30, 2024 (for calendar year 2023), and each April 30 thereafter, and the first November 30 report on or before November 30, 2023, (for May 1 through September 30), and each year thereafter, using Division-approved format.

- I.H.7.a.(i) A list of the glycol natural gas dehydrator(s) subject to Section I.H.;
 - I.H.7.a.(ii) A list of the condenser or air pollution control equipment used to control emissions of volatile organic compounds from the glycol natural gas dehydrator(s); and
 - I.H.7.a.(iii) The date(s) of inspection(s) where the condenser or air pollution control equipment was found not operating properly or where smoke was observed.
- I.I. The requirements of Sections I.D. through I.F. do not apply to the owner or operator of any natural gas compressor station or natural gas drip station located in an Ozone Nonattainment or Attainment/Maintenance Area if:
 - I.I.1. Air pollution control equipment is installed and properly operated to reduce emissions of volatile organic compounds from all atmospheric condensate storage tanks (or tank batteries) that have uncontrolled actual emissions of greater than or equal to two tons per year;
 - I.I.2. The air pollution control equipment is designed to achieve a VOC control efficiency of at least 95% on a rolling 12-month basis and meets the requirements of Sections I.C.1.a. and I.C.1.b.;
 - I.I.3. The owner or operator of such natural gas compressor station or natural gas drip station does not own or operate any exploration and production facilities in the Ozone Non-attainment or Attainment-maintenance Area; and
 - I.I.4. The owner or operator of such natural gas compressor station or natural gas drip station does the following and maintains associated records and reports for a period of five years:
 - I.I.4.a. Documents the maintenance of the air pollution control equipment according to manufacturer specifications;
 - I.I.4.b. Conducts an annual opacity observation once each year on the air pollution control equipment to verify opacity does not exceed 20% during normal operations;
 - I.I.4.c. Maintains records of the monthly stabilized condensate throughput and monthly actual VOC emissions; and
 - I.I.4.d. Reports compliance with these requirements to the Division annually.
 - I.I.5. A natural gas compressor station or natural gas drip station subject to Section I.I. at which a glycol natural gas dehydrator and/or natural gas-fired stationary or portable engine is operated is subject to Sections I.H., I.J., and/or Regulation Number 26, Part B, Section I. A natural gas compressor station subject to Section I.I. is also subject to Section I.L.
- I.J. Compressors
 - I.J.1. Centrifugal compressor

- I.J.1.a. Beginning January 1, 2018, or May 1, 2023, if located in northern Weld County, uncontrolled actual volatile organic compound emissions from wet seal fluid degassing systems on wet seal centrifugal compressors located between the wellhead and the point of custody transfer to the natural gas transmission and storage segment must be reduced by at least 95%. A centrifugal compressor located at a well production facility, or an adjacent well production facility and servicing more than one well production facility, is not subject to Section I.J.1.
- I.J.1.b. If the owner or operator uses a control device or routes emissions to a process to reduce emissions, the owner or operator must equip the wet seal fluid degassing system with a continuous, impermeable cover that is connected through a closed vent system that routes the emissions from the wet seal fluid degassing system to the process or control device.
- I.J.1.c. The owner or operator must conduct annual visual inspections of the cover and closed vent system for defects that could result in air emissions. Defects of the closed vent system include, but are not limited to, visible cracks, holes, gaps in piping, loose connections, liquid leaks, or broken or missing caps or other closure devices. Defects of the cover include, but are not limited to, visible cracks, holes, gaps in the cover or between the cover and separator wall, broken or damaged seals or gaskets on closure devices, broken or missing hatches or other closure devices.
- I.J.1.d. The owner or operator must conduct annual EPA Method 21 inspections of the cover and closed vent system to determine whether the cover and closed vent system operates with volatile organic compound emissions less than 500 ppm.
- I.J.1.e. In the event that a defect that could result in air emissions or leak is detected, the owner or operator must make a first attempt to repair no later than five (5) days after detecting the defect or leak and complete repair no later than thirty (30) days after detecting the defect or leak.
- I.J.1.f. Owners or operators may delay inspection or repair of a cover or closed vent system if:
 - I.J.1.f.(i) Repair is technically infeasible without a shutdown. If shutdown is required, a repair attempt must be made during the next scheduled shutdown and final repair completed within two (2) years after discovery.
 - I.J.1.f.(ii) The cover or closed vent system is unsafe to inspect or repair because personnel would be exposed to an immediate danger as a consequence of completing the inspection or repair.
 - I.J.1.f.(iii) The cover or closed vent system is difficult to inspect or repair because personnel must be elevated more than two (2) meters above a supported surface or are unable to inspect or repair via a wheeled scissor-lift or hydraulic type scaffold that allows access up to 7.6 meters (25 feet) above the ground.
 - I.J.1.f.(iv) The cover or closed vent system is inaccessible to inspect or repair because the cover or closed vent system is buried, insulated, or obstructed by equipment or piping that prevents access.

- I.J.1.g. The owner or operator must conduct monthly inspections of a combustion device used to reduce emissions to ensure the device is operating with no visible emissions. If smoke is observed, either the equipment must be immediately shut-in to investigate the potential cause for smoke and perform repairs, as necessary, or EPA Method 22 must be conducted. Devices fail the visible emissions test if a Method 22 observation documents visible emissions are present for more than one minute in any 15-minute period. Devices failing the visible emissions test must follow manufacturer's repair instructions, if available, or best combustion engineering practice to return the unit to compliant operation. Following return to operation, the owner or operator must complete a Method 22 visual observation where there are less than one minute of visible emissions in any 15-minute period.
- I.J.1.h. For a combustion device used to reduce VOC emissions from wet seal fluid degassing systems on wet seal centrifugal compressors, the owner or operator must conduct a performance test in accordance with 40 CFR Part 60, Subpart OOOOa, Section 60.5413a(b) (June 3, 2016) by May 1, 2023, or May 1, 2024, if located in northern Weld County, and subsequent performance tests no longer than 60 months following the previous performance test. Control device models tested in accordance with 40 CFR Part 60, Subpart OOOOa, Section 60.5413a(d) and demonstrating continuous compliance in accordance with 40 CFR Part 60, Subpart OOOOa, Section 60.5413a(e)(1) (June 3, 2016) are not subject to the performance test requirement.
- I.J.1.i. Recordkeeping
- I.J.1.i.(i) Owners or operators must maintain the following records for at least five (5) years and make records available to the Division upon request:
- I.J.1.i.(i)(A) Identification of each centrifugal compressor using a wet seal system;
- I.J.1.i.(i)(B) Each combustion device visible emissions inspection and any resulting responsive actions;
- I.J.1.i.(i)(C) Each cover and closed vent system inspection and any resulting responsive actions; and
- I.J.1.i.(i)(D) Each cover or closed vent system on the delay of inspection or repair list, the reason for and duration of the delay of inspection or repair, and the schedule for inspecting or repairing such cover or closed vent system.
- I.J.1.i.(i)(E) Each performance test or manufacturer demonstration of control device model performance test, and associated inlet gas flow rate records.
- I.J.1.i.(i)(F) Records of visual inspections conducted pursuant to Section I.J.1.g., including the time and date of each inspection and a description of any problems observed, description and date of any corrective action(s) taken, and name of employee or third party performing corrective action(s).

- I.J.1.j. As an alternative to the inspection, repair, and recordkeeping provisions in Sections I.J.1.c. through I.J.1.f., I.J.1.h.(i)(C), and I.J.1.h.(i)(D), the owner or operator may inspect, repair, and document the cover and closed vent system in accordance with the leak detection and repair program in Section I.L., including the inspection frequency.
- I.J.1.k. As an alternative to the emission control, inspection, repair, and recordkeeping provisions described in Sections I.J.1.a. through I.J.1.i., the owner or operator may comply with wet seal centrifugal compressors emission control, monitoring, recordkeeping, and reporting requirements of a New Source Performance Standard in 40 CFR Part 60 (November 16, 2017).
- I.J.2. Reciprocating compressor
 - I.J.2.a. Beginning January 1, 2018, or February 14, 2023, if located in northern Weld County, the rod packing on reciprocating compressors located between the wellhead and the point of custody transfer to the natural gas transmission and storage segment must be replaced every 26,000 hours of operation or every thirty-six (36) months. A reciprocating compressor located at a well production facility, or an adjacent well production facility and servicing more than one well production facility, is not subject to Section I.J.2.
 - I.J.2.a.(i) Owners or operators of reciprocating compressors located at a natural gas processing plant and constructed before January 1, 2018, or February 14, 2023, if located in northern Weld County must
 - I.J.2.a.(i)(A) Begin monitoring the hours of operation starting January 1, 2018, or February 14, 2023, if located in northern Weld County, unless already monitoring under Section II.B.3.; or
 - I.J.2.a.(i)(B) Conduct the first rod packing replacement required under Section I.J.2. prior to January 1, 2021, or February 14, 2026, if located in northern Weld County, unless under a replacement schedule under Section II.B.3.
 - I.J.2.a.(ii) Owners or operators of reciprocating compressors located at a natural gas processing plant and constructed after January 1, 2018, or February 14, 2023, if located in northern Weld County, must begin monitoring the hours or months of operation upon commencement of operation of the reciprocating compressor, unless the compressor located in northern Weld County is already monitoring under Section II.B.3.d.
 - I.J.2.b. As an alternative to the requirement described in Section I.J.2.a., beginning May 1, 2018, or February 14, 2023, if located in northern Weld County, the owner or operator may collect rod packing volatile organic compound emissions using a rod packing emissions collection system that operates under negative pressure and routes the rod packing emissions through a closed vent system to a process.

- I.J.2.b.(i) The owner or operator must conduct annual visual inspections of the cover and closed vent system for defects that could result in air emissions. Defects of the closed vent system include, but are not limited to, visible cracks, holes, gaps in piping, loose connections, liquid leaks, or broken or missing caps or other closure devices. Defects of the cover include, but are not limited to, visible cracks, holes, gaps in the cover or between the cover and separator wall, broken or damaged seals or gaskets on closure devices, broken or missing hatches or other closure devices.
- I.J.2.b.(ii) The owner or operator must conduct annual EPA Method 21 inspections of the cover and closed vent system to determine whether the cover and closed vent system operates with volatile organic compound emissions less than 500 ppm.
- I.J.2.b.(iii) In the event that a defect that could result in air emissions or leak is detected, the owner or operator must make a first attempt to repair no later than five (5) days after detecting the defect or leak and complete repair no later than thirty (30) days after detecting the defect or leak.
- I.J.2.b.(iv) Owners or operators may delay inspection or repair of a cover or closed vent system if:
 - I.J.2.b.(iv)(A) Repair is technically infeasible without a shutdown. If shutdown is required, a repair attempt must be made during the next scheduled shutdown and final repair completed within two (2) years after discovery.
 - I.J.2.b.(iv)(B) The cover or closed vent system is unsafe to inspect or repair because personnel would be exposed to an immediate danger as a consequence of completing the inspection or repair.
 - I.J.2.b.(iv)(C) The cover or closed vent system is difficult to inspect or repair because personnel must be elevated more than two (2) meters above a supported surface or are unable to inspect or repair via a wheeled scissor-lift or hydraulic type scaffold that allows access up to 7.6 meters (25 feet) above the ground.
 - I.J.2.b.(iv)(D) The cover or closed vent system is inaccessible to inspect or repair because the cover or closed vent system is buried, insulated, or obstructed by equipment or piping that prevents access.
- I.J.2.c. Recordkeeping
 - I.J.2.c.(i) Owners or operators must maintain the following records for at least five (5) years and make records available to the Division upon request:
 - I.J.2.c.(i)(A) Identification of each reciprocating compressor;

- I.J.2.c.(i)(B) The hours of operation or the number of months since the previous rod packing replacement, or a statement that emissions from the rod packing are being routed to a process through a closed vent system under negative pressure;
- I.J.2.c.(i)(C) The date of each rod packing replacement, or date of installation of a rod packing emissions collection system and closed vent system;
- I.J.2.c.(i)(D) Each cover and closed vent system inspection and any resulting responsive actions; and
- I.J.2.c.(i)(E) Each cover or closed vent system on the delay of inspection or repair list, the reason for and duration of the delay of inspection or repair, and the schedule for inspecting or repairing such cover or closed vent system.

I.J.2.d. As an alternative to the inspection, repair, and recordkeeping provisions in Sections I.J.2.b., I.J.2.c.(i)(D), and I.J.2.c.(i)(E), the owner or operator may inspect, repair, and document the cover and closed vent system in accordance with the leak detection and repair program in Section I.L., including the inspection frequency.

I.J.2.e. As an alternative to the emission control, inspection, repair, and recordkeeping provisions described in Sections I.J.2.a. through I.J.2.d., the owner or operator may comply with reciprocating compressor emission control, monitoring, recordkeeping, and reporting requirements of a New Source Performance Standard in 40 CFR Part 60 (November 16, 2017).

I.K. Pneumatic pumps

- I.K.1. Beginning May 1, 2018, or July 1, 2023, if located in northern Weld County, the owner or operator of each natural gas-driven diaphragm pneumatic pump located at a natural gas processing plant must ensure the pneumatic pump has a volatile organic compound emission rate of zero.
- I.K.2. Beginning May 1, 2018, or July 1, 2023, if located in northern Weld County, the owner or operator of each natural gas-driven diaphragm pneumatic pump located at a well production facility must reduce volatile organic compound emissions from the pneumatic pump by 95% if it is technically feasible to route emissions to an existing control device or process at the well production facility. Natural gas-driven diaphragm pneumatic pumps that are in operation during any period of time during a calendar day less than 90 days per calendar year are not subject to Section I.K.2.
 - I.K.2.a. If the control device available onsite is unable to achieve a 95% emission reduction and it is not technically feasible to route the emissions to a process at the well production facility, the owner or operator must still route the pneumatic pump emissions to the existing control device.
 - I.K.2.b. If the owner or operator subsequently installs a control device or it becomes technically feasible to route the emissions to a process, the owner or operator must reduce volatile organic compound emissions from the pneumatic pump by 95% within thirty (30) days of startup of the control device or of the feasibility of routing emissions to a process at the well production facility.

- I.K.2.c. The owner or operator is not required to control pneumatic pump emissions if, through an engineering assessment by a qualified professional engineer, routing a pneumatic pump to a control device or process at the well production facility is shown to be technically infeasible.
- I.K.2.d. If the owner or operator uses a control device or routes emissions to a process to reduce emissions, the owner or operator must connect the pneumatic pump through a closed vent system that routes the pneumatic pump emissions to the process or control device.
- I.K.2.e. The owner or operator must conduct annual visual inspections of the closed vent system for defects that could result in air emissions. Defects of the closed vent system include, but are not limited to, visible cracks, holes, gaps in piping, loose connections, liquid leaks, or broken or missing caps or other closure devices.
- I.K.2.f. The owner or operators must conduct annual EPA Method 21 inspections of the closed vent system to determine whether the closed vent system operates with volatile organic compound emissions less than 500 ppm.
- I.K.2.g. In the event that a defect that could result in air emissions or leak is detected, the owner or operator must make a first attempt to repair no later than five (5) days after detecting the defect or leak and complete repair no later than thirty (30) days after detecting the defect or leak.
- I.K.2.h. Owners or operators may delay inspection or repair of a closed vent system if:
 - I.K.2.h.(i) Repair is technically infeasible without a shutdown. If shutdown is required, a repair attempt must be made during the next scheduled shutdown and final repair completed within two (2) years after discovery.
 - I.K.2.h.(ii) The closed vent system is unsafe to inspect or repair because personnel would be exposed to an immediate danger as a consequence of completing the inspection or repair.
 - I.K.2.h.(iii) The closed vent system is difficult to inspect or repair because personnel must be elevated more than two (2) meters above a supported surface or are unable to inspect or repair via a wheeled scissor-lift or hydraulic type scaffold that allows access up to 7.6 meters (25 feet) above the ground.
 - I.K.2.h.(iv) The closed vent system is inaccessible to inspect or repair because the closed vent system is buried, insulated, or obstructed by equipment or piping that prevents access.

I.K.3. Recordkeeping

- I.K.3.a. Owners or operators must maintain the following records for at least five (5) years and make records available to the Division upon request:
 - I.K.3.a.(i) Identification of each natural gas-driven diaphragm pneumatic pump;

- I.K.3.a.(ii) For natural gas-driven diaphragm pneumatic pumps in operation less than 90 days per calendar year, records of the days of operation each calendar year;
 - I.K.3.a.(iii) Records of control devices designed to achieve less than 95% emission reduction, including an evaluation or manufacturer specifications indicating the percentage reduction the control device is designed to achieve;
 - I.K.3.a.(iv) Records of the engineering assessment and certification by a qualified professional engineer that routing natural gas-driven diaphragm pneumatic pump emissions to a control device or process is technically infeasible;
 - I.K.3.a.(v) Each closed vent system inspection and any resulting responsive actions; and
 - I.K.3.a.(vi) Each closed vent system on the delay of inspection or repair list, the reason for and duration of the delay of inspection or repair, and the schedule for inspecting or repairing such closed vent system.
- I.K.4. As an alternative to the inspection, repair, and recordkeeping provisions in Sections I.K.2.e. through I.K.2.h., I.K.3.a.(v), and I.K.3.a.(vi), the owner or operator may inspect, repair, and document the closed vent system in accordance with the leak detection and repair program in Section I.L., including the inspection frequency.
- I.K.5. As an alternative to the emission control, inspection, repair, and recordkeeping provisions described in Sections I.K.1. through I.K.4., the owner or operator may comply with natural gas-driven diaphragm pneumatic pump emission control, monitoring, recordkeeping, and reporting requirements of a New Source Performance Standard in 40 CFR Part 60 (November 16, 2017).
- I.L. Leak detection and repair program for well production facilities and natural gas compressor stations located in the 8-hour Ozone Control Area or northern Weld County, or centralized oil stabilization facilities specified in Section I.A.3.
 - I.L.1. Natural gas compressor stations
 - I.L.1.a. Beginning June 30, 2018, or February 14, 2023, if located in northern Weld County, owners or operators of natural gas compressor stations must inspect components for leaks using an approved instrument monitoring method at least quarterly.
 - I.L.1.b. Owners or operators of natural gas compressor stations constructed on or after June 30, 2018, or February 14, 2023, if located in northern Weld County, must conduct an initial inspection for leaks from components using an approved instrument monitoring method no later than ninety (90) days after the facility commences operation. Thereafter, approved instrument monitoring method inspections must be conducted at least quarterly.
 - I.L.2. Well production facilities

- I.L.2.a. Beginning June 30, 2018, or February 14, 2023, if located in northern Weld County, owners or operators of well production facilities with uncontrolled actual volatile organic compound emissions greater than or equal to one (1) ton per year and less than or equal to six (6) tons per year, based on a rolling twelve-month total, must inspect components for leaks using an approved instrument monitoring method at least annually.
- I.L.2.b. Beginning June 30, 2018, or February 14, 2023, if located in northern Weld County, owners or operators of well production facilities with uncontrolled actual volatile organic compound emissions greater than six (6) tons per year, based on a rolling twelve-month total, must inspect components for leaks using an approved instrument monitoring method at least semi-annually.
- I.L.2.c. For purposes of Sections I.L.2.a. and I.L.2.b., the estimated uncontrolled actual volatile organic compound emissions from the highest emitting storage tank at the well production facility determines the frequency at which inspections must be performed. If no storage tanks storing oil or condensate are located at the well production facility, owners or operators must rely on the facility emissions (controlled actual volatile organic compound emissions from all permanent equipment, including emissions from components determined by utilizing the emission factors defined as less than 10,000 ppmv of Table 2-8 of the 1995 EPA Protocol for Equipment Leak Emission Estimates).
- I.L.2.d. Owners or operators of well production facilities constructed on or after June 30, 2018, or February 14, 2023, if located in northern Weld County, must conduct an initial inspection for leaks from components using an approved instrument monitoring method no sooner than fifteen (15) days and no later than thirty (30) days after the facility commences operation. Thereafter, approved instrument monitoring method inspections must be conducted in accordance with Sections I.L.2.a. and I.L.2.b.
- I.L.2.e. Beginning April 1, 2023, owners or operators of centralized oil stabilization facilities specified in Section I.A.3. must inspect components for leaks using an approved instrument monitoring method at least quarterly.
- I.L.3. If a component is unsafe, difficult, or inaccessible to monitor, the owner or operator is not required to monitor the component until it becomes feasible to do so.
 - I.L.3.a. Difficult to monitor components are those that cannot be monitored without elevating the monitoring personnel more than two (2) meters above a supported surface or are unable to be reached via a wheeled scissor-lift or hydraulic type scaffold that allows access to components up to 7.6 meters (25 feet) above the ground.
 - I.L.3.b. Unsafe to monitor components are those that cannot be monitored without exposing monitoring personnel to an immediate danger as a consequence of completing the monitoring.
 - I.L.3.c. Inaccessible to monitor components are those that are buried, insulated, or obstructed by equipment or piping that prevents access to the components by monitoring personnel.
- I.L.4. Leaks requiring repair: Only leaks from components exceeding the thresholds in Section I.L.4. require repair under Section I.L.5.

- I.L.4.a. For EPA Method 21 monitoring, repair is required for leaks with any concentration of hydrocarbon above 500 ppm not associated with normal equipment operation, such as pneumatic device actuation and crank case ventilation.
- I.L.4.b. For infra-red camera monitoring, repair is required for leaks with any detectable emissions not associated with normal equipment operation, such as pneumatic device actuation and crank case ventilation.
- I.L.4.c. For other approved instrument monitoring methods or programs, leak identification requiring repair will be established as set forth in an approval under Section I.L.8.
- I.L.4.d. For leaks identified using an approved non-quantitative instrument monitoring method, owners or operators have the option of either repairing the leak in accordance with the repair schedule set forth in Section I.L.5. or conducting follow-up monitoring using EPA Method 21 within five (5) working days of the leak detection. If the follow-up EPA Method 21 monitoring shows that the emission is a leak requiring repair as set forth in Section I.L.4.a., the leak must be repaired and remonitored in accordance with Section I.L.5.
- I.L.4.e. Owners or operators must maintain and operate approved non-quantitative instrument monitoring methods according to manufacturer recommendations.
- I.L.5. Repair and remonitoring
 - I.L.5.a. First attempt to repair a leak must be made no later than five (5) working days after discovery and completed no later than thirty (30) working days after discovery, unless parts are unavailable, the equipment requires shutdown to complete repair, or other good cause exists.
 - I.L.5.a.(i) If parts are unavailable, they must be ordered promptly and the repair must be made within fifteen (15) working days of receipt of the parts.
 - I.L.5.a.(ii) If shutdown is required, a repair attempt must be made during the next scheduled shutdown and final repair completed within two (2) years after discovery.
 - I.L.5.a.(iii) If delay is attributable to other good cause, repairs must be completed within fifteen (15) working days after the cause of delay ceases to exist.
 - I.L.5.b. Within fifteen (15) working days of completion of a repair the leak must be remonitored using an approved instrument monitoring method to verify that the repair was effective.
 - I.L.5.c. Leaks discovered pursuant to the leak detection methods of Section I.L.4. are not subject to enforcement by the Division unless the owner or operator fails to perform the required repairs in accordance with Section I.L.5. or keep required records in accordance with Section I.L.6.
- I.L.6. Recordkeeping

- I.L.6.a. Documentation of the initial approved instrument monitoring method inspection for well production facilities and natural gas compressor stations;
- I.L.6.b. The date, facility name, and facility AIRS ID or facility location if the facility does not have an AIRS ID for each inspection;
- I.L.6.c. A list of the leaks requiring repair and the monitoring method(s) used to determine the presence of the leak;
- I.L.6.d. The date of first attempt to repair the leak and, if necessary, any additional attempt to repair;
- I.L.6.e. The date the leak was repaired and type of repair method applied;
- I.L.6.f. The delayed repair list, including the date and duration of any period where the repair of a leak was delayed due to unavailable parts, required shutdown, or delay for other good cause, the basis for the delay, and the schedule for repairing the leak. Delay of repair beyond thirty (30) days after initial discovery due to unavailable parts must be reviewed, and a record kept of that review, by a representative of the owner or operator with responsibility for leak detection and repair compliance functions. This review will not be made by the individual making the initial determination to place a part on the delayed repair list;
- I.L.6.g. The date the leak was remonitored and the results of the remonitoring; and
- I.L.6.h. A list of components that are designated as unsafe, difficult, or inaccessible to monitor, as described in Section I.L.3., an explanation stating why the component is so designated, and the schedule for monitoring such component(s).
- I.L.6.i. Records must be maintained for a minimum of five years and made available to the Division upon request.
- I.L.7. Reporting: The owner or operator of each facility subject to the leak detection and repair requirements in Section I.L. must submit a single annual report on or before May 31st of each year (beginning May 31st, 2019, or May 31st, 2024, if located in northern Weld County or a centralized oil stabilization facilities specified in Section I.A.3) that includes, at a minimum, the following information regarding leak detection and repair activities at their subject facilities conducted the previous calendar year:
 - I.L.7.a. The total number of well production facilities, total number of natural gas compressor stations inspected, and total number of centralized oil stabilization facilities inspected;
 - I.L.7.b. The total number of inspections performed per inspection frequency tier of well production facilities, the total number of inspections performed at natural gas compressor stations, and the total number of inspections performed at centralized oil stabilization facilities;
 - I.L.7.c. The total number of identified leaks requiring repair broken out by component type, monitoring method, and inspection frequency tier of well production facility as reported in Section I.L.7.b., the total number of identified leaks requiring repair at natural gas compressor stations broken out by component type and monitoring method, and the total number of identified leaks requiring repair at centralized oil stabilization facilities broken out by component type and monitoring method;

- I.L.7.d. The total number of leaks repaired for each inspection frequency tier of well production facilities as reported in Section I.L.7.b., the total number of leaks repaired for natural gas compressor stations, and the total number of leaks repaired for centralized oil stabilization facilities;
- I.L.7.e. The total number of leaks on the delayed repair list as of December 31st broken out by component type, inspection frequency tier of well production facility as reported in Section I.L.7.b.; natural gas compressor station, or centralized oil stabilization facilities, and the basis for each delay of repair;
- I.L.7.f. The record of all reviews conducted for delayed repairs due to unavailable parts extending beyond 30 days for the previous calendar year; and
- I.L.7.g. Each report shall be accompanied by a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- I.L.8. Alternative approved instrument monitoring methods may be used in lieu of, or in combination with an infra-red camera, EPA Method 21, or other approved instrument monitoring method to inspect for leaks as required by Section I.L., if the following conditions are met:
 - I.L.8.a. The proponent of the alternative approved instrument monitoring method applies for a determination of an alternative approved instrument monitoring method or program. The application must include, at a minimum, the following:
 - I.L.8.a.(i) The proposed alternative approved instrument monitoring method manufacturer information;
 - I.L.8.a.(ii) A description of the proposed alternative approved instrument monitoring method including, but not limited to:
 - I.L.8.a.(ii)(A) Whether the proposed alternative approved instrument monitoring method is a quantitative detection method, and how emissions are quantified, or qualitative leak detection method;
 - I.L.8.a.(ii)(B) Whether the proposed alternative approved instrument monitoring method is commercially available;
 - I.L.8.a.(ii)(C) Whether the proposed alternative approved instrument monitoring method is approved by other regulatory authorities and for what application (e.g., pipeline monitoring, emissions detected);
 - I.L.8.a.(ii)(D) The leak detection capabilities, reliability, and limitations of the proposed alternative approved instrument monitoring method, including, but not limited to, the ability to identify specific leaks or locations, detection limits, and any restrictions on use, as well as supporting data;
 - I.L.8.a.(ii)(E) The frequency of measurements and data logging capabilities of the proposed alternative approved instrument monitoring method;

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| I.L.8.a.(ii)(F) | Data quality indicators for precision and bias of the proposed alternative approved instrument monitoring method; |
| I.L.8.a.(ii)(G) | Quality control and quality assurance procedures necessary to ensure proper operation of the proposed alternative approved instrument monitoring method; |
| I.L.8.a.(ii)(H) | A description of where, when, and how the proposed alternative approved instrument monitoring method will be used; and |
| I.L.8.a.(ii)(I) | Documentation (e.g., field or test data, modeling) adequate to demonstrate the proposed alternative approved instrument monitoring method or program is capable of achieving emission reductions that are at least as effective as the emission reductions achieved by the leak detection and repair provisions in Section I.L. |
| I.L.8.a.(iii) | The Division will transmit a copy of the complete application and any other materials provided by the applicant to EPA. |
| I.L.8.a.(iv) | Public notice of the application is provided pursuant to Regulation Number 3, Part B, Section III.C.4. |
| I.L.8.a.(v) | The Division and the EPA approves the proposal. The Division will transmit a copy of the application and any other materials provided by the applicant, all public comments, all Division responses and the Division's approval to EPA Region 8. If EPA fails to approve or disapprove the proposal within six (6) months of receipt of these materials, EPA will be deemed to have approved the proposal. |
- I.M. Storage tank hydrocarbon liquids loadout requirements at class II disposal well facilities specified in Section I.A.4., well production facilities, natural gas compressor stations, and natural gas processing plants.
- I.M.1. Owners or operators of well production facilities, natural gas compressor stations, and natural gas processing plants with a hydrocarbon liquids loadout to transport vehicles throughput of greater than or equal to 5,000 barrels per year on a rolling 12-month basis must control emissions from the loadout of hydrocarbon liquids from controlled storage tanks to transport vehicles by using (a) submerged fill and (b) a vapor collection and return system and/or air pollution control equipment.
- Owners or operators of class II disposal well facilities with VOC emissions from hydrocarbon liquids loadout to transport vehicles greater than or equal to two (2) tons uncontrolled actual emissions per year on a rolling 12-month basis must control emissions from the loadout of hydrocarbon liquids from storage tanks to transport vehicles by using (a) submerged fill and (b) a vapor collection and return system and/or air pollution control equipment.
- I.M.1.a. Compliance with Section I.M. must be achieved in accordance with the following schedule.
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- I.M.1.a.(i) Facilities constructed or modified on or after February 14, 2023, must be in compliance by commencement of operation
- I.M.1.a.(ii) Well production facilities, natural gas compressor stations, and natural gas processing plants that exceed the hydrocarbon liquids loadout to transport vehicles throughput of greater than or equal to 5,000 barrels per year on a rolling 12-month basis on or after February 14, 2023, must control emissions from loadout upon exceeding the loadout threshold.
- I.M.1.a.(iii) Class II disposal well facilities that exceed the hydrocarbon liquids loadout to transport vehicles emissions threshold of greater than or equal to two (2) tons uncontrolled actual VOC emissions per year on a rolling 12-month basis on or after February 14, 2023, must control emissions from loadout within sixty (60) days of the first day of the month after which loadout emissions exceeded the loadout threshold.

I.M.1.b. Storage tanks must operate without venting at all times during loadout.

I.M.1.c. The owner or operator must, as applicable

- I.M.1.c.(i) Install and operate the vapor collection and return equipment to collect vapors during the loadout of hydrocarbon liquids to tank compartments of outbound transport vehicles and to route the vapors to the storage tank or air pollution control equipment.
- I.M.1.c.(ii) Include devices to prevent the release of vapor from vapor recovery hoses not in use.
- I.M.1.c.(iii) Use operating procedures to ensure that hydrocarbon liquids cannot be transferred to transport vehicles unless the vapor collection and return system is in use.
- I.M.1.c.(iv) Operate all recovery and disposal equipment at a back-pressure less than the pressure relief valve setting of transport vehicles.
- I.M.1.c.(v) The owner or operator must inspect onsite loading equipment to ensure that hoses, couplings, and valves are maintained to prevent dripping, leaking, or other liquid or vapor loss during loadout. These inspections must occur at least monthly, unless loadout occurs less frequently, then as often as loadout is occurring.

I.M.1.d. Owners or operators must retain records for at least five (5) years and make such records available to the Division upon request.

- I.M.1.d.(i) Records of the annual facility hydrocarbon liquids loadout to transport vehicles throughput.
- I.M.1.d.(ii) Records of class II disposal well facility VOC emissions from hydrocarbon liquids loadout to transport vehicles on a rolling 12-month basis.
- I.M.1.d.(iii) Records of the frequency of loadout.

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| I.M.1.d.(iv) | Inspections, including a description of any problems found and their resolution, required under Section I.M.1.c.(v) must be documented in a log. |
| I.M.1.d.(v) | Air pollution control equipment used to comply with this Section I.M. must comply with Section I.C.1, be inspected in accordance with Sections I.E.2.c.(i), I.E.2.c.(ii), and I.E.2.c.(iv), and achieve a hydrocarbon control efficiency of 95%. |

II. (State Only) Statewide Controls for Oil and Gas Operations

II.A. (State Only) Definitions

- II.A.1. "Air Pollution Control Equipment," as used in this Section II., means a combustion device or vapor recovery unit. Air pollution control equipment also means alternative emissions control equipment and pollution prevention devices and processes intended to reduce uncontrolled actual emissions that comply with the requirements of Section II.B.2.e.
- II.A.2. "Approved Instrument Monitoring Method," means an infra-red camera, EPA Method 21, or other Division approved instrument based monitoring method or program. If an owner or operator elects to use Division approved continuous emission monitoring, the Division may approve a streamlined inspection and reporting program for such operations, including approved instrument monitoring method and/or AVO inspections.
- II.A.3. "Auto-Igniter" means a device which will automatically attempt to relight the pilot flame in the combustion chamber of a control device in order to combust VOC emissions.
- II.A.4. "Blowdown" as used in Section II.H., means the depressurization of equipment or piping to reduce system pressure. Blowdown includes venting as defined in Section II.C.2.a.(i) (B) where the venting was intentional.
- II.A.5. "Centrifugal Compressor" means any machine used for raising the pressure of natural gas by drawing in low pressure natural gas and discharging significantly higher pressure natural gas by means of mechanical rotating vanes or impellers. Screw, sliding vane, and liquid ring compressors are not centrifugal compressors.
- II.A.6. "Class II Disposal Well Facility" means a facility that injects underground fluids which are brought to the surface in connection with natural gas storage operations or oil or natural gas production and that may be commingled with waste waters from gas plants which are an integral part of production operations, unless those waters are classified as a hazardous waste at the time of injection. Class II disposal well facilities do not include wells which inject fluids for enhanced recovery of oil or natural gas or for storage of hydrocarbons which are liquid at standard temperature and pressure.
- II.A.7. "Closed Liquids Containment System" as used in Section II.H. means an assembly of piping and valves that allow for the transfer of liquid from a pigging unit to a pipeline or pressurized vessel at the operating pressure of the midstream gathering pipeline.
- II.A.8. "Commencement of Operation" means when a source first conducts the activity that it was designed and permitted for. In addition, for oil and gas well production facilities, commencement of operation is the date any permanent production equipment is in use and product is consistently flowing to sales lines, gathering lines, or storage tanks from the first producing well at the stationary source, but no later than end of well completion operations (including flowback).

- II.A.9. "Component" means each pump seal, flange, pressure relief device (including thief hatches or other openings on a controlled storage tank), connector, and valve that contains or contacts a process stream with hydrocarbons, except for components in process streams consisting of glycol, amine, produced water, or methanol.
- II.A.10. "Connector" means flanged, screwed, or other joined fittings used to connect two pipes or a pipe and a piece of process equipment or that close an opening in a pipe that could be connected to another pipe. Joined fittings welded completely around the circumference of the interface are not considered connectors.
- II.A.11. "Disproportionately Impacted Community" (DI community) means census block groups designated as DI communities in CDPHE's Data Viewer for Disproportionately Impacted Communities (as of December 17, 2021), at https://cohealthviz.dphe.state.co.us/t/EnvironmentalEpidemiologyPublic/views/EJActDICommunities-Public/HB21-1266DICommunities?%3AshowAppBanner=false&%3Adisplay_count=n&%3AshowVizHome=n&%3Aorigin=viz_share_link&%3AisGuestRedirectFromVizportal=y&%3Aembed=y consistent with 24-4-109(2)(II), C.R.S. (2021). A complete list of these census block groups by 12-digit FIPS code will be maintained by the Division and made publicly available.
- II.A.12. "Dump Valve" means a liquid-control valve in a separator that controls liquid level within the separator vessel.
- II.A.13. "Dump Event" means the opening of a dump valve allowing liquid to flow from a separator equipped with a dump valve to a storage tank.
- II.A.14. "Glycol Natural Gas Dehydrator" means any device in which a liquid glycol (including ethylene glycol, diethylene glycol, or triethylene glycol) absorbent directly contacts a natural gas stream and absorbs water.
- II.A.15. "High-pressure Pigging Pipeline" as used in Section II.H. means a pigging pipeline with a normal operating pressure (average annual operating pressure) of 500 pounds per square inch gauge (psi) or greater.
- II.A.16. "Hot Tapping" means a procedure that makes a new pipeline connection while the pipeline remains in service, flowing natural gas under pressure. The procedure involves attaching a branch connection and valve on the outside of an operating pipeline and then cutting out the pipe-line wall within the branch and removing the wall section through the valve.
- II.A.17. "Hydrocarbon Liquid" means any naturally occurring, unrefined petroleum liquid. Hydrocarbon liquid does not include produced water.
- II.A.18. "Infra-red Camera" means an optical gas imaging instrument designed for and capable of detecting hydrocarbons.
- II.A.19. "Jumper Line" means an enclosed piping system attached to the vent line or other connection of a pig launcher or receiver that routes the contents of a pig launcher or receiver into a lower pressure system.

- II.A.20. "Midstream Pipeline" means the pipeline and metering and regulating equipment delivering oil or natural gas from an oil or gas well or well production facility to a stand-alone pigging station, natural gas compressor station, natural gas processing plant, transmission pipeline, or direct use. Midstream pipeline also means the pipeline and metering and regulating equipment delivering oil or natural gas from a natural gas compressor station to a stand-alone pigging station, natural gas processing plant, transmission pipeline, or direct use.
- II.A.21. "Midstream Segment" means the oil and natural gas compression segment and the natural gas processing segment upstream of the natural gas transmission and storage segment.
- II.A.22. "Natural Gas Compressor Station" means a facility, located downstream of well production facilities, which contains one or more compressors designed to compress natural gas from well pressure to gathering system pressure prior to the inlet of a natural gas processing plant.
- II.A.23. "Natural Gas Processing Segment" means the operations engaged in the separation of natural gas liquids (NGLs) or non-methane gases from produced natural gas, or the separation of NGLs into one or more component mixtures. Separation includes one or more of the following: forced extraction of natural gas liquids, sulfur and carbon dioxide removal, fractionation of NGLs, or the capture of CO₂ separated from natural gas streams. This segment also includes all residue gas compression equipment owned or operated by the natural gas processing plant.
- II.A.24. "Natural Gas Transmission and Storage Segment" means onshore natural gas transmission pipelines, onshore natural gas transmission compression, underground natural gas storage, and liquefied natural gas (LNG) storage, as these terms are defined in 40 CFR Part 98, Section 98.230 (October 22, 2015), that are physically located in Colorado.
- II.A.25. "Normal Operation" means all periods of operation, excluding malfunctions as defined in Section I.G. of the Common Provisions regulation. For storage tanks at well production facilities, normal operation includes but is not limited to liquid dumps from the separator.
- II.A.26. "Northern Weld County" means the portion of the county that does not lie south of a line described as follows: Beginning at a point on Weld County's eastern boundary and Logan County's western boundary intersected by 40 degrees, 42 minutes, 47.1 seconds north latitude, proceed west on 40 degrees, 42 minutes, 47.1 seconds north latitude until this line intersects Weld County's western boundary and Larimer County's eastern boundary.
- II.A.27. "Occupied Areas" means (1) a building or structure designed for use as a place of residency by a person, a family, or families. The term includes manufactured, mobile, and modular homes, except to the extent that any such manufactured, mobile, or modular home is intended for temporary occupancy or for business purposes; (2) indoor or outdoor spaces associated with a school that students use commonly as part of their curriculum or extracurricular activities; (3) five thousand (5,000) or more square feet of building floor area in commercial facilities that are operating and normally occupied during working hours; and (4) an outdoor venue or recreation area, such as a playground, permanent sports field, amphitheater, or other similar place of outdoor public assembly.

- II.A.28. "Oil and Natural Gas Compression Segment" means the oil and natural gas compression, midstream pipelines, and other equipment used to collect oil and/or natural gas from gas or oil wells and used to compress, dehydrate, sweeten, or transport the oil and/or natural gas to a natural gas processing facility, a natural gas transmission pipeline, or to a natural gas distribution pipeline. For purposes of Section II., equipment located within the boundaries of a well production facility, including but not limited to compressors, is excluded from the oil and natural gas compression segment.
- II.A.29. "Open-Ended Valve or Line" means any valve, except safety relief valves, having one side of the valve seat in contact with process fluid and one side open to the atmosphere, either directly or through open piping.
- II.A.30. "Pig Ramp" means a device installed inside the barrel of a pig receiver designed and intended to prevent liquid accumulation in the barrel and minimize release of volatile liquids into the environment during retrieval of the pig.
- II.A.31. "Pigging" or "Pigging Operations" means the process of introducing or subsequently removing a specialized device (a "pig") into or out of a natural gas pipeline to remove liquids or debris or for other purposes.
- II.A.32. "Pigging Facility" means the facility from where a pig is launched or the facility where a pig is received, including standalone pigging stations, natural gas compressor stations, natural gas processing plants, well sites, or well production facilities.
- II.A.33. "Pigging Pipeline" means a pipeline connected to a permanent or temporary pigging unit or any pipeline through which a pig is transported.
- II.A.34. "Pigging Unit" means an individual pig launcher or receiver owned or operated by a midstream segment owner or operator where pigging occurs, including both permanent and temporary pig launchers and receivers.
- II.A.35. "Pressure actuator system", as used in Section II.B., means a system that monitors and records flow pressure to enclosed combustion device(s), automatically actuates a valve to open flow to the enclosed combustion device(s) at a pressure setpoint ("open point"), and automatically actuates the same valve to close flow to the enclosed combustion device(s) at a low pressure setpoint ("close point"). The pressure setpoints for the open point and close point are selected by the owner or operator.
- II.A.36. "Process drain" as used in Section II.H. means an enclosed drain located on the underside of the pig receiver that drains liquids from the receiver into an enclosed system, process, or vessel.
- II.A.37. "Produced Water" means water that is extracted from the earth from an oil or natural gas production well, or that is separated from crude oil, condensate, or natural gas after extraction.
- II.A.38. "Reciprocating Compressor" means a piece of equipment that increases the pressure of process gas by positive displacement, employing linear movement of the piston rod.
- II.A.39. "Stabilized" when used to refer to crude oil, condensate, intermediate hydrocarbon liquids, or produced water means that the vapor pressure of the liquid is sufficiently low to prevent the production of vapor phase upon transferring the liquid to an atmospheric pressure in a storage tank, and that any emissions that occur are limited to those commonly referred to within the industry as working, breathing, and standing losses.

- II.A.40. "Standalone Pigging Station" means a pigging unit or group of co-located pigging units owned or operated by a midstream segment owner or operator but not located at a natural gas compressor station or natural gas processing plant.
- II.A.41. "Storage Tank" means any fixed roof storage vessel or series of storage vessels that are manifolded together via liquid line. Storage tanks may be located at a well production facility or other location.
- II.A.42. "Storage Tank Measurement System" means equipment and methods used to determine the quantity and quality of the liquids inside a storage tank without requiring direct access through the storage tank thief hatch.
- II.A.43. "Storage Vessel" means a tank or other vessel that contains an accumulation of hydrocarbon liquids or produced water and is constructed primarily of nonearthed materials (such as wood, concrete, steel, fiberglass, or plastic) which provide structural support. A well completion vessel that receives recovered liquids from a well after commencement of operation for a period which exceeds 60 days is considered a storage vessel. Storage vessel does not include vessels that are skid-mounted or permanently attached to something that is mobile (such as trucks, railcars, barges, or ships) and are intended to be located at the site for less than 180 consecutive days; process vessels such as surge control vessels, bottom receivers, or knockout vessels; or pressure vessels designed to operate in excess of 204.9 kilopascals and without emissions to the atmosphere.
- II.A.44. "Vapor Collection and Return System" means a closed system designed to control the release of VOCs displaced from a vessel during transfer of hydrocarbon liquids by using the transferred hydrocarbon liquids for direct displacement to force vapors from the vessel being loaded into either the storage tank being unloaded or to air pollution control equipment.
- II.A.45. "Visible Emissions" means observations of smoke for any period or periods of duration greater than or equal to one (1) minute in any fifteen (15) minute period during normal operation, pursuant to EPA Method 22. Visible emissions do not include radiant energy or water vapor.
- II.A.46. "Well Production Facility" means all equipment at a single stationary source directly associated with one or more oil wells or natural gas wells upstream of the natural gas processing plant. This equipment includes, but is not limited to, equipment used for storage, separation, treating, dehydration, artificial lift, combustion, compression, pumping, metering, monitoring, and flowline.
- II.B. (State Only) General Provisions
 - II.B.1. General requirements for prevention of emissions and good air pollution control practices for all oil and gas exploration and production operations; Class II disposal well facilities; well production facilities; and midstream segment operations, including natural gas compressor stations and natural gas processing plants.
 - II.B.1.a. All hydrocarbon liquids and produced water collection, storage, processing, and handling operations, regardless of size, must be designed, operated, and maintained so as to minimize emission of VOCs and other hydrocarbons to the atmosphere to the extent reasonably practicable.

II.B.1.b. At all times, including periods of start-up and shutdown, the facility and air pollution control equipment must be maintained and operated in a manner consistent with good air pollution control practices for minimizing emissions. Determination of whether or not acceptable operation and maintenance procedures are being used will be based on information available to the Division, which may include, but is not limited to, monitoring results, opacity observations, review of operation and maintenance procedures, and inspection of the source.

II.B.2. General requirements for air pollution control equipment used to comply with Section II.

II.B.2.a. All air pollution control equipment must be operated and maintained pursuant to the manufacturing specifications or equivalent to the extent practicable, and consistent with technological limitations and good engineering and maintenance practices. The owner or operator must keep manufacturer specifications or equivalent on file. In addition, all such air pollution control equipment must be adequately designed and sized to achieve the control efficiency rates and to handle reasonably foreseeable fluctuations in emissions of VOCs and other hydrocarbons during normal operations. Fluctuations in emissions that occur when the separator dumps into the tank are reasonably foreseeable.

II.B.2.b. If a combustion device is used to control emissions of VOCs and other hydrocarbons, it must be enclosed, have no visible emissions during normal operation, and be designed so that an observer can, by means of visual observation from the outside of the enclosed combustion device, or by other means approved by the Division, determine whether it is operating properly.

II.B.2.c. Any of the effective dates for installation of controls on storage tanks, dehydrators, and/or internal combustion engines may be extended at the Division's discretion for good cause shown.

II.B.2.d. Auto-igniters: All combustion devices used to control emissions of hydrocarbons must be equipped with and operate an auto-igniter as follows

II.B.2.d.(i) All combustion devices installed on or after May 1, 2014, must be equipped with an operational auto-igniter upon installation of the combustion device.

II.B.2.d.(ii) All combustion devices installed before May 1, 2014, must be equipped with an operational auto-igniter by or before May 1, 2016, or after the next combustion device planned shutdown, whichever comes first.

II.B.2.e. Alternative emissions control equipment will qualify as air pollution control equipment, and may be used in lieu of, or in combination with, combustion devices and vapor recovery units to achieve the emission reductions required by this Section II., if the Division approves the equipment, device, or process. As part of the approval process the Division, at its discretion, may specify a different control efficiency than the control efficiencies required by this Section II.

II.B.2.f. Owners or operators must conduct weekly visual inspections of air pollution control equipment.

II.B.2.f.(i) Visual inspections must begin

- II.B.2.f.(i)(A) February 14, 2022, for owners or operators of storage tanks subject to Section II.C.1.
- II.B.2.f.(i)(B) May 1, 2022, for air pollution control equipment that commenced operation before February 14, 2022, unless subject to Section II.B.2.f.(i)(A).
- II.B.2.f.(i)(C) Within thirty (30) days of commencement of operation for air pollution control equipment constructed on or after February 14, 2022.
- II.B.2.f.(ii) Weekly visual inspections must include, at a minimum
 - II.B.2.f.(ii)(A) Inspection or monitoring of each combustion device to ensure that it is operating, including that the pilot light is lit and the auto-igniter is properly functioning.
 - II.B.2.f.(ii)(B) Inspection or monitoring of each combustion device to ensure that the valves for the piping of gas to the pilot light are open and functioning properly.
 - II.B.2.f.(ii)(C) Inspection or monitoring of each combustion device to ensure the burner tray is not visibly clogged.
 - II.B.2.f.(ii)(D) Inspection of each combustion device for the presence or absence of smoke. If smoke is observed, either the equipment must be immediately shut-in to investigate the potential cause for smoke and perform repairs, as necessary, or EPA Method 22 must be conducted to determine whether visible emissions are present for a period of at least one (1) minute in fifteen (15) minutes.
 - II.B.2.f.(ii)(E) Inspection or monitoring of each vapor recovery unit to ensure that the unit is operating and that vapors are being routed to the unit.
 - II.B.2.f.(ii)(F) Inspection or monitoring of air pollution control equipment to ensure that valves for the piping of gas to the air pollution control equipment are open.
 - II.B.2.f.(ii)(G) Recording the flow meter readings or pressure actuator system data, once installed pursuant to Section II.B.2.g. (i). For flow meter readings, this must include the maximum and minimum measured flow rate since the previous weekly visual inspection. For pressure actuator system data, this must include the maximum and minimum measured pressures while the actuator valve is open since the previous weekly visual inspection. An owner or operator may use automation to continuously record flow and/or pressure to the enclosed combustion device(s) for which flow meters or pressure actuator system are required under Section II.B.2.g.

- II.B.2.g. Owners or operators must install and operate either flow meter(s) or a pressure actuator system at the inlet to the enclosed combustion device or bank of enclosed combustion devices, ensuring that the flow meter(s) or pressure actuator system measures the flow rate or pressure of all flow streams to the device or bank of enclosed combustion devices.
- II.B.2.g.(i) Unless an extension is authorized by the Division for good cause, flow meter(s) or a pressure actuator system must be installed and operating by
- II.B.2.g.(i)(A) December 31, 2022, for enclosed combustion devices in disproportionately impacted communities that commenced operation before February 14, 2022.
- II.B.2.g.(i)(B) May 1, 2023, for enclosed combustion devices not subject to Section II.B.2.g.(i)(A) that commenced operation before February 14, 2022.
- II.B.2.g.(i)(C) Commencement of operation for enclosed combustion devices that commence operation on or after February 14, 2022.
- II.B.2.g.(ii) The owner or operator must calibrate and maintain the flow meter(s) and pressure actuator system in accordance with the manufacturer's specifications and schedule, if available, or otherwise in accordance with generally accepted calibration and maintenance practices.
- II.B.2.g.(iii) Flow meters or a pressure actuator system are not required to be installed
- II.B.2.g.(iii)(A) On portable enclosed combustion devices used at a location for less than 180 consecutive days and which are used for time-limited activities or backup purposes.
- II.B.2.g.(iii)(B) On enclosed combustion devices used during vapor recovery unit downtime associated with dehydrators.
- II.B.2.g.(iii)(C) Where installation and operation of a flow meter or pressure actuator system is technically or economically infeasible, as demonstrated by the owner or operator to the Division's reasonable satisfaction, or where the Division approves the use of an alternate parameter (and associated recordkeeping and reporting).
- II.B.2.h. Beginning February 14, 2022, the owner or operator must conduct performance tests for each enclosed combustion device for which Regulation Number 7, Part B, Sections I.D., II.B.3.b., II.C.1., II.D., or II.F. requires the device to achieve at least 95% control efficiency for hydrocarbons. A performance test that does not demonstrate that an enclosed combustion device is achieving at least 95% control efficiency for hydrocarbons is considered a failing test.
- II.B.2.h.(i) Performance test requirements.

- II.B.2.h.(i)(A) Performance tests are not required for enclosed combustion devices serving solely as limited-use control devices during vapor recovery unit downtime.
- II.B.2.h.(i)(B) Owners or operators must test all enclosed combustion devices used to control the same piece of equipment or operation (e.g., a bank of enclosed combustion devices controlling a storage tank) over the course of the same testing event, which may occur over multiple working days.
- II.B.2.h.(i)(C) Performance tests must be conducted in accordance with a Division-approved test protocol.
- II.B.2.h.(i)(D) With enough time to calibrate and ensure proper reading from the flow meter prior to each performance test conducted under Section II.B.2.h. and continuing through the performance test, owner or operators must install and operate a flow meter on the inlet to each enclosed combustion device to be tested, unless not required by the Division-approved performance test protocol. Temporary flow meters may be used to meet this requirement.
- II.B.2.h.(i)(E) For the calendar year of a failing performance test, owners or operators must calculate enclosed combustion device emissions (or the emissions for the source controlled) pursuant to Sections II.G. and V. with the results of the failed test until the enclosed combustion device is back in compliance as confirmed by the passing retest under Section II.B.2.h.(i)(G).
- II.B.2.h.(i)(F) Owners or operators of enclosed combustion devices that fail a performance test must, within thirty (30) days, follow the manufacturer's repair instructions, if available, or best combustion engineering practices to return the device to compliant operation or shut-in all equipment or operations controlled by the enclosed combustion device.
- II.B.2.h.(i)(G) Owners or operators must retest the enclosed combustion device within ninety (90) days of corrective action in response to a failed test or within thirty (30) days of return to operation if the equipment or operations controlled by the enclosed combustion device were shut-in as a response to a failed test. Division approval of the testing protocol is not required for a retest where.
 - II.B.2.h.(i)(G)(1) The owner or operator is following the same test protocol as the original, failed test and
 - II.B.2.h.(i)(G)(2) Conditions have not materially changed such that a new test protocol would be required.

II.B.2.h.(i)(H) As an alternative to Section II.B.2.h.(i)(G), the owner or operator may replace the failing enclosed combustion device with a different enclosed combustion device and test the replacement enclosed combustion device upon commencement of operation. The owner or operator does not have to test the replacement enclosed combustion device if the device is newly manufactured (has never been in operation anywhere else) and has been tested by the manufacturer in accordance with the requirements of 40 CFR Part 60, Subpart OOOOa, Section 60.5413a(d) (June 3, 2016).

II.B.2.h.(ii) Initial performance test schedule.

II.B.2.h.(ii)(A) Enclosed combustion devices that commenced operation before December 31, 2021, must be tested within the schedule in Table 1, unless the Division approves an alternative testing schedule.

Table 1 – Enclosed Combustion Device Inspections						
Location of enclosed combustion device	Compliance deadlines					
	October 31, 2023	October 31, 2024	May 1, 2025	May 1, 2026	May 1, 2027	May 1, 2028
	Percentage (%) of owner or operator's enclosed combustion devices that must be tested					
Within a DI community	At least 15%	At least 40%	At least 70%	100%	NA	NA
Within the 8-hour ozone control area and northern Weld County	At least 10%	At least 30%	At least 50%	At least 80%	100%	NA
Outside the 8-hour ozone control area and northern Weld County	At least 5%	At least 15%	At least 30%	At least 50%	At least 75%	100%

II.B.2.h.(ii)(B) A performance test conducted in accordance with Division-approved test protocol between January 1, 2020, and October 31, 2023, will satisfy the initial performance testing requirements in Section II.B.2.h.(ii)(A).

- II.B.2.h.(ii)(C) Enclosed combustion devices that commence operation on or after December 31, 2021, must be tested within two (2) years after commencement of operation, unless the enclosed combustion device is newly manufactured (has never been in operation) and has been tested by the manufacturer in accordance with the requirements of 40 CFR Part 60, Subpart OOOOa, Section 60.5413a(d) (June 3, 2016), in which case the enclosed combustion device must be tested within five (5) years after commencement of operation.
- II.B.2.h.(ii)(D) No enclosed combustion device located in the 8-hour ozone control area and northern Weld County or in a disproportionately impacted community can operate for more than five (5) years without a performance test.
- II.B.2.h.(ii)(E) No enclosed combustion device located outside the 8-hour ozone control area and northern Weld County but not within a disproportionately impacted community can operate for more than ten (10) years without a performance test.
- II.B.2.h.(ii)(F) Owners or operators do not have to start up a source solely to perform a performance test on the enclosed combustion device if gas flow to the device is from a source or equipment that has been shut-in for more than thirty (30) consecutive days; however, a performance test is required within thirty (30) days of the enclosed combustion device once again receiving gas flow.

II.B.2.h.(iii) Notification.

No later than July 31, 2022, owners or operators of enclosed combustion devices subject to Section II.B.2.h.(ii) must submit a notification to the Division with the following information.

- II.B.2.h.(iii)(A) A list of all enclosed combustion devices that commenced operation before December 31, 2021, with associated facility name and location, AIRS ID (if assigned), manufacturer model, serial number (if available, or other unique identifier), and identification of equipment controlled by the enclosed combustion device.
- II.B.2.h.(iii)(B) The year in which each enclosed combustion device will be tested to meet the compliance schedule in Table 1.
- II.B.2.h.(iii)(C) A list of enclosed combustion devices where the initial performance test requirement is satisfied pursuant to Section II.B.2.h.(ii)(B), including the date and results of the test.

II.B.2.h.(iv) Subsequent performance tests.

- II.B.2.h.(iv)(A) Enclosed combustion devices located in the 8-hour ozone control area and northern Weld County must be tested within five (5) years following the previous performance test, unless the enclosed combustion device is newly manufactured (has never been in operation) and has been tested by the manufacturer in accordance with the requirements of 40 CFR Part 60, Subpart OOOOa, Section 60.5413a(d) (June 3, 2016), in which case the enclosed combustion device must be tested within eight (8) years following the previous performance test.
- II.B.2.h.(iv)(B) Enclosed combustion devices located within a disproportionately impacted community must be tested within five (5) years following the previous performance test, unless the enclosed combustion device is newly manufactured (has never been in operation) and has been tested by the manufacturer in accordance with the requirements of 40 CFR Part 60, Subpart OOOOa, Section 60.5413a(d) (June 3, 2016), in which case the enclosed combustion device must be tested within eight (8) years following the previous performance test.
- II.B.2.h.(iv)(C) Enclosed combustion devices located outside the 8-hour ozone control area and northern Weld County and not within a disproportionately impacted community must be tested within ten (10) years following the previous performance test.

II.B.2.i. Recordkeeping.

Except as specified in Section II.B.2.i.(ix), the owner or operator must maintain records for a period of five (5) years and make them available to the Division upon request, including

- II.B.2.i.(i) Notifications submitted in accordance with Section II.B.2.h.(iii).
- II.B.2.i.(ii) Records of the make, model, serial number or other unique identifier, and AIRS ID (if assigned) of each enclosed combustion device; associated facility name and location; and the range of gas flow at which the combustion device is designed to operate.
- II.B.2.i.(iii) Records of visual inspections conducted pursuant to Section II.B.2.f., including the time and date of each inspection and a description of any problems observed, description and date of any corrective action(s) taken, and name of employee or third party performing corrective action(s).
- II.B.2.i.(iv) Records of the date and result of any EPA Method 22 test or investigation.
- II.B.2.i.(v) Records of the date and duration of any period where the air pollution control equipment is not operating.

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- II.B.2.i.(vi) Monthly records of the total hours the vapor recovery unit is not operating, the total throughput volume, and total throughput volume during the time the vapor recovery unit is not operating.
- II.B.2.i.(vii) Records of inlet gas flow rate, as required by Section II.B.2.f.(ii)(G).
- II.B.2.i.(viii) Records supporting the delay of any performance test pursuant to Section II.B.2.h.(ii)(F).
- II.B.2.i.(ix) Records of performance tests must be maintained for the life of the equipment that the enclosed combustion device is used to control (even if ownership or control of the device is transferred), including manufacturer model and serial number(s) of devices tested; the date of the test; a copy of the test protocol followed; a certification by a responsible official that the performance test was conducted in accordance with a Division-approved test protocol; the enclosed combustion device parameters required by the test protocol; documentation of the methods and results of the test, including whether the device passed or failed and the tested control efficiency; and the date and description of any actions taken in response to a failed test.
- II.B.2.i.(x) Records of flow meter or pressure actuation system calibration and maintenance conducted pursuant to Section II.B.2.g.(ii), including manufacturer specifications and schedule if available.
- II.B.2.j. Reporting. The owner or operator must submit the following information to the Division.
- II.B.2.j.(i) By no later than the final day of the month after the failing test result, the owner or operator must submit a notification of the failing test, including: AIRS ID, serial number or other unique identifier, and equipment or operation controlled; the date of test; the results of the test; monthly methane and VOC emission calculations using the test results for the calendar year of the test; monthly throughput for the calendar year of the test; the action to return the enclosed combustion device to proper operation (or whether operations were shut-in), including the timing thereof; and the proposed date of the retest.
- II.B.2.j.(ii) On the same date as the annual emissions inventory report in Part B, Section V., the owner or operator must submit the date of each performance test and the results of the test (i.e., pass/fail and tested control efficiency).
- II.B.2.j.(iii) By July 31 of each year (beginning 2023 and ending 2027 or upon completion of the initial performance testing schedule set forth in Table 1), owners or operators must submit an update to the notification provided under Section II.B.2.h.(iii) documenting changes to the list specified in Section II.B.2.h.(iii)(A) (e.g., an enclosed combustion device moved to a different facility (including transfer to another operator) or controlling more or less equipment or operations than specified) and changes to the performance testing schedule provided pursuant to Section II.B.2.h.(iii)(B).
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- II.B.3. Requirements for compressor seals and open-ended valves or lines
 - II.B.3.a. Beginning January 1, 2015, each open-ended valve or line at well production facilities and natural gas compressor stations must be equipped with a cap, blind flange, plug, or a second valve that seals the open end at all times except during operations requiring process fluid flow through the open-ended valve or line. Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the requirement to seal the open end of the valve or line. Alternatively, an open-ended valve or line may be treated as if it is a "component" as defined in Section II.A.7., and may be monitored under the provisions of Section II.E.
 - II.B.3.b. Beginning January 1, 2015, uncontrolled actual hydrocarbon emissions from wet seal fluid degassing systems on wet seal centrifugal compressors must be reduced by at least 95%, unless the centrifugal compressor is subject to 40 CFR Part 60, Subpart OOOO (February 23, 2014) or 40 CFR Part 60, Subpart OOOOa (June 3, 2016) on that date or thereafter.
 - II.B.3.c. Beginning January 1, 2015, the rod packing on any reciprocating compressor located at a natural gas compressor station must be replaced every 26,000 hours of operation or every thirty-six (36) months, unless the reciprocating compressor is subject to the reciprocating compressor emission control, monitoring, recordkeeping, and reporting requirements of 40 CFR Part 60, Subpart OOOO (February 23, 2014) or 40 CFR Part 60, Subpart OOOOa (June 3, 2016) on that date or thereafter. The measurement of accumulated hours of operation (26,000) or months elapsed (36) begins on January 1, 2015.
 - II.B.3.d. Beginning February 14, 2022, the rod packing on any reciprocating compressor located at a natural gas processing plant must be replaced every 26,000 hours of operation or every thirty-six (36) months, unless the reciprocating compressor is subject to the reciprocating compressor emission control, monitoring, recordkeeping, and reporting requirements of Section I.J.2., 40 CFR Part 60, Subpart OOOO (February 23, 2014), or 40 CFR Part 60, Subpart OOOOa (June 3, 2016) on that date or thereafter. The measurement of accumulated hours of operation (26,000) or months elapsed (36) begins on February 14, 2022.
- II.B.4. Oil refineries are not subject to Section II.
- II.B.5. Glycol natural gas dehydrators that are subject to an emissions control requirement in a federal maximum achievable control technology ("MACT") standard under 40 CFR Part 63 (July 1, 2022), a Best Available Control Technology ("BACT") limit, or a New Source Performance Standard ("NSPS") under 40 CFR Part 60 (July 1, 2022) are not subject to Section II., except for the leak detection and repair requirements in Section II.E.
- II.C. Emission reduction from storage tanks at oil and gas exploration and production operations, Class II disposal well facilities, well production facilities, natural gas compressor stations, and natural gas processing plants.
 - II.C.1. Control and monitoring requirements for storage tanks

II.C.1.a. (State Only) Beginning May 1, 2008, owners or operators of all storage tanks storing condensate with uncontrolled actual emissions of VOCs equal to or greater than twenty (20) tons per year based on a rolling twelve-month total must collect and control emissions from each storage tank by routing emissions to and operating air pollution control equipment that has a control efficiency of at least 95% for VOCs.

II.C.1.b. (State Only) Owners or operators of storage tanks with uncontrolled actual emissions of VOCs equal to or greater than six (6) tons per year based on a rolling twelve-month total must collect and control emissions from each storage tank by routing emissions to and operating air pollution control equipment that achieves a hydrocarbon control efficiency of 95%. If a combustion device is used, it must have a design destruction efficiency of at least 98% for hydrocarbons, except where the combustion device has been authorized by permit prior to May 1, 2014.

II.C.1.b.(i) (State Only) Control requirements of Section II.C.1.b. must be achieved in accordance with the following schedule:

II.C.1.b.(i)(A) A storage tank constructed on or after May 1, 2014, must be in compliance within ninety (90) days of the date that the storage tank commences operation.

II.C.1.b.(i)(B) A storage tank constructed before May 1, 2014, must be in compliance by May 1, 2015.

II.C.1.b.(i)(C) A storage tank not otherwise subject to Sections II.C.1.b.(i)(A) or II.C.1.b.(i)(B) that increases uncontrolled actual emissions to six (6) tons per year VOC or more on a rolling twelve-month basis after May 1, 2014, must be in compliance within sixty (60) days of discovery of the emissions increase.

II.C.1.b.(ii). Control requirements within ninety (90) days of commencement of operation.

II.C.1.b.(ii)(A) Beginning May 1, 2014, through March 1, 2020, owners or operators of storage tanks at well production facilities must collect and control emissions by routing emissions to operating air pollution control equipment during the first ninety (90) calendar days after commencement of operation. The air pollution control equipment must achieve a hydrocarbon control efficiency of 95%. If a combustion device is used, it must have a design destruction efficiency of at least 98% for hydrocarbons. This control requirement does not apply to storage tanks that are projected to have emissions less than 1.5 tons of VOC during the first ninety (90) days after commencement of operation.

II.C.1.b.(ii)(B) The air pollution control equipment and any associated monitoring equipment required pursuant to Section II.C.1.c.(i) may be removed at any time after the first ninety (90) calendar days as long as the source can demonstrate that uncontrolled actual emissions from the storage tank will be below the threshold in Section II.C.1.b.

II.C.1.c. (State Only) Owners or operators of storage tanks with uncontrolled actual emissions of VOCs equal to or greater than two (2) tons per year based on a rolling twelve-month total must collect and control emissions from each storage tank by routing emissions to and operating air pollution control equipment that achieves a hydrocarbon control efficiency of 95%. If a combustion device is used, it must have a design destruction efficiency of at least 98% for hydrocarbons, except where the combustion device has been authorized by permit prior to March 1, 2020.

II.C.1.c.(i) Control requirements of Section II.C.1.c. must be achieved in accordance with the following schedule

II.C.1.c.(i)(A) A storage tank constructed on or after March 1, 2020, must be in compliance by commencement of operation of that storage tank.

II.C.1.c.(i)(B) A storage tank constructed before March 1, 2020, that is not already controlled under Sections I.D. or II.C.1.b. must be in compliance by May 1, 2021.

II.C.1.c.(i)(C) A storage tank not otherwise subject to Sections II.C.1.c.(i)(A) or II.C.1.c.(i)(B) that increases uncontrolled actual emissions above the applicable threshold in Section II.C.1.c.(i)(B) after the applicable date in Section II.C.1.c.(i)(B) must be in compliance within sixty (60) days of the first day of the month after which the storage tank emissions exceeded the applicable threshold based on a rolling twelve-month basis.

II.C.1.c.(ii) If air pollution control equipment is not installed by the applicable compliance date in Sections II.C.1.c.(i)(A), II.C.1.c.(i)(B), or II.C.1.c.(i)(C), compliance with Section II.C.1.c. may alternatively be demonstrated by shutting in all wells producing into that storage tank by the date in Sections II.C.1.c.(i)(A), II.C.1.c.(i)(B), or II.C.1.c.(i)(C) so long as production does not resume from any such well until the air pollution control equipment is installed and operational.

II.C.1.c.(iii) Owners or operators of storage tanks for which the use of air pollution control equipment would be technically infeasible without supplemental fuel may apply to the Division for an exemption from the control requirements of Section II.C.1.c. Such request must include documentation demonstrating the infeasibility of the air pollution control equipment. The applicability of this exemption does not relieve owners or operators of compliance with the storage tank monitoring requirements of Section II.C.1.d.

II.C.1.d. (State Only) Beginning May 1, 2014, or the applicable compliance date in Sections II.C.1.b.(i) or II.C.1.c.(i), whichever comes later, owners or operators of storage tanks subject to Section II.C.1. must conduct audio, visual, olfactory (AVO) and additional visual inspections of the storage tank and any associated equipment (e.g., separator, air pollution control equipment, or other pressure reducing equipment) at the same frequency as liquids are loaded out from the storage tank. These inspections are not required more frequently than every seven (7) days but must be conducted at least every thirty-one (31) days. Monitoring is not required for storage tanks or associated equipment that are unsafe, difficult, or inaccessible to monitor, as defined in Section II.C.1.e. The additional visual inspections must include, at a minimum:

- II.C.1.d.(i) Visual inspection of any thief hatch, pressure relief valve, or other access point to ensure that they are closed and properly sealed.
- II.C.1.d.(ii) Repealed (February 14, 2022).
- II.C.1.d.(iii) Repealed (February 14, 2022).
- II.C.1.d.(iv) Repealed (February 14, 2022).
- II.C.1.d.(v) Repealed (February 14, 2022).
- II.C.1.d.(vi) Beginning May 1, 2020, or the applicable compliance date in Section II.C.1.c.(i), whichever comes later, visual observation of the dump valve(s) of the last separator(s) before the storage tank(s) to ensure the dump valve is free of debris and not stuck open. The owner or operator is not required to observe the actuation of the dump valve during this inspection; however, if a dump event occurs during the inspection, the owner or operator must confirm proper operation of the valve.
- II.C.1.d.(vii) Beginning May 1, 2020, or the applicable compliance date in Section II.C.1.c.(i), whichever comes later, a check for the presence of liquids in liquid knockout vessels that do not drain automatically, underground lines, and aboveground piping.
 - II.C.1.d.(vii)(A) For liquid knockout vessels for which a procedure exists to check liquid level, check for the presence of liquids. If liquids are present above the low level indication point, drain liquids.
 - II.C.1.d.(vii)(B) For liquid knockout vessels for which no procedure exists to check liquid level, drain liquids.
 - II.C.1.d.(vii)(C) For underground lines and aboveground piping that is not sloped to a liquid knockout or tank and for which a procedure exists to check for the presence of liquids accumulation, check for the presence of liquids and drain liquids as needed.

- II.C.1.d.(vii)(D) For underground lines and aboveground piping that is not sloped to a liquid knockout vessel or tank and for which no written procedure exists to check for the presence of liquids accumulation, drain liquids quarterly.
- II.C.1.e. (State Only) If storage tanks or associated equipment is unsafe, difficult, or inaccessible to monitor, the owner or operator is not required to monitor such equipment until it becomes feasible to do so.
 - II.C.1.e.(i) Difficult to monitor means it cannot be monitored without elevating the monitoring personnel more than two meters above a supported surface or is unable to be reached via a wheeled scissor-lift or hydraulic type scaffold that allows access up to 7.6 meters (25 feet) above the ground.
 - II.C.1.e.(ii) Unsafe to monitor means it cannot be monitored without exposing monitoring personnel to an immediate danger as a consequence of completing the monitoring.
 - II.C.1.e.(iii) Inaccessible to monitor means buried, insulated, or obstructed by equipment or piping that prevents access by monitoring personnel.
- II.C.2. (State Only) Capture and monitoring requirements for storage tanks that are fitted with air pollution control equipment as required by Sections I.D. or II.C.1.
 - II.C.2.a. Owners or operators of storage tanks must route all hydrocarbon emissions to air pollution control equipment, and must operate without venting hydrocarbon emissions from the thief hatch (or other access point to the tank) or pressure relief device during normal operation. This requirement does not apply where venting is reasonably required for maintenance, unless the control of maintenance emissions is required pursuant to Section II.H.2.; gauging, unless the use of a storage tank measurement system is required pursuant to and the operator complies with Section II.C.4.; or safety of personnel and equipment. Compliance must be achieved in accordance with the schedule in Section II.C.2.b.(ii).
 - II.C.2.a.(i) Venting is emissions from a controlled storage tank thief hatch, pressure relief device, or other access point to the storage tank, which:
 - II.C.2.a.(i)(A) Are primarily the result of over-pressurization, whether related to design, operation, or maintenance; or
 - II.C.2.a.(i)(B) Are the result of an open, unlatched, or visibly unseated pressure relief device (e.g., thief hatch or pressure relief valve), an open vent line, or an unintended opening in the storage tank (e.g., crack or hole).

- II.C.2.a.(ii) When emissions from a controlled storage tank are observed, the Division may require the owner or operator to submit sufficient information demonstrating whether or not the emissions were primarily the result of over-pressurization. Absent a demonstration that such emissions were not primarily the result of over-pressurization, such emissions will be considered venting for purposes of Section II.C.2.a.
- II.C.2.a.(iii) When venting is observed, the owner or operator must confirm within twenty-four (24) hours of taking action to return the storage tank to operation without venting that the action(s) taken was effective. If the venting was observed using an approved instrument monitoring method, the confirmation must be made using an approved instrument monitoring method.
- II.C.2.b. Owners or operators of storage tanks subject to the control requirements of Sections I.D., II.C.1.a, II.C.1.b., or II.C.1.c. must develop, certify, and implement a documented Storage Tank Emission Management System (STEM) plan to identify, evaluate, and employ appropriate control technologies, monitoring practices, operational practices, and/or other strategies designed to meet the requirements set forth in Section II.C.2.a. Owners or operators must update the STEM plan as necessary to achieve or maintain compliance. Owners or operators are not required to develop and implement STEM for storage tanks containing only stabilized liquids. The minimum elements of STEM are listed.
 - II.C.2.b.(i) STEM plans must include selected control technologies, monitoring practices, operational practices, and/or other strategies; an analysis of the engineering design of the storage tank and air pollution control equipment; procedures for evaluating ongoing storage tank emission capture performance; and monitoring in accordance with approved instrument monitoring methods following the applicable schedule in Section II.C.2.b.(ii).
 - II.C.2.b.(ii) Owners or operators must achieve the requirements of Sections II.C.2.a. and II.C.2.b. and begin implementing the required approved instrument monitoring method in accordance with the following schedule
 - II.C.2.b.(ii)(A) A storage tank subject to Sections II.C.1.a. or II.C.1.b. and constructed on or after May 1, 2014, must comply with the requirements of Section II.C.2.a. by the date the storage tank commences operation. The storage tank must comply with Section II.C.2.b. and implement the approved instrument monitoring method inspections within ninety (90) days of the date that the storage tank commences operation.
 - II.C.2.b.(ii)(B) A storage tank subject to Sections II.C.1.a. or II.C.1.b. and constructed before May 1, 2014, must comply with the requirements of Sections II.C.2.a. and II.C.2.b. by May 1, 2015.

- II.C.2.b.(ii)(C) A storage tank subject to Section II.C.1.c. and constructed on or after March 1, 2020, must comply with the requirements of Section II.C.2.a. by commencement of operation of the storage tank. The storage tank must comply with Section II.C.2.b. and implement the approved instrument monitoring method inspections within ninety (90) days of commencement of operation of the storage tank.
- II.C.2.b.(ii)(D) A storage tank subject to Sections II.C.1.c. and I.D.3. and constructed before March 1, 2020, that is not subject to the control requirements of the system-wide control strategy in Section I.D.1. must comply with the requirements of Sections II.C.2.a. and II.C.2.b. by May 1, 2020, or by commencement of operation of the storage tank, whichever comes later.
- II.C.2.b.(ii)(E) A storage tank subject to Section II.C.1.c. and constructed before March 1, 2020, that is not subject to the control requirements of the system-wide control strategy in Section I.D.1. must comply with the requirements of Sections II.C.2.a. and II.C.2.b. by May 1, 2021. Approved instrument monitoring method inspections of the storage tank must begin in 2021.
- II.C.2.b.(ii)(F) A storage tank with uncontrolled actual emissions of VOCs equal to or greater than six (6) and less than or equal to twelve (12) tons per year must begin semi-annual approved instrument monitoring method inspections in 2020.
- II.C.2.b.(ii)(G) A storage tank not otherwise subject to Sections II.C.2.b.(ii)(A) or II.C.2.b.(ii)(B) that increases uncontrolled actual emissions to six (6) tons per year VOC or more on a rolling twelve month basis after May 1, 2014, must comply with the requirements of Sections II.C.2.a. and II.C.2.b. and implement the required approved instrument monitoring method inspections within sixty (60) days of the first day of the month after which the storage tank emissions exceeded the applicable threshold based on a rolling twelve-month basis..
- II.C.2.b.(ii)(H) A storage tank not otherwise subject to Sections II.C.2.b.(ii)(A) through II.C.2.b.(ii)(F) that increases uncontrolled actual emissions above the applicable threshold in Section II.C.1.c.(i)(B) after the applicable date in Section II.C.1.c.(i)(B), must comply with the requirements of Sections II.C.2.a. and II.C.2.b. and implement the required approved instrument monitoring method inspections within sixty (60) days of the first day of the month after which the storage tank VOC emissions exceeded the applicable threshold based on a rolling twelve-month basis.
- II.C.2.b.(ii)(I) Following the first approved instrument monitoring method inspection, owners or operators must continue

conducting approved instrument monitoring method inspections in accordance with the inspection frequency in Table 2.

Table 2 – Storage Tank Inspections	
Threshold: Storage Tank Uncontrolled Actual VOC Emissions (tpy)	Approved Instrument Monitoring Method Inspection Frequency
≥ 2 and ≤ 12	Semi-annually
> 12 and ≤ 50	Quarterly
> 50	Monthly

II.C.2.b.(iii) Owners or operators are not required to monitor storage tanks and associated equipment that are unsafe, difficult, or inaccessible to monitor, as defined in Section II.C.1.e.

II.C.2.b.(iv) STEM must include a certification by the owner or operator that the selected STEM strategy(ies) are designed to minimize emissions from storage tanks and associated equipment at the facility(ies), including thief hatches and pressure relief devices.

II.C.3. (State Only) Recordkeeping: The owner or operator of each storage tank subject to Sections I.D. or II.C. must maintain records of STEM, if applicable, including the plan, any updates, and the certification, and make them available to the Division upon request. In addition, for a period of two (2) years, the owner or operator must maintain records of any required monitoring and make them available to the Division upon request, including

II.C.3.a. The AIRS ID for the storage tank.

II.C.3.b. The date and duration of any period where the thief hatch, pressure relief device, or other access point are found to be venting hydrocarbon emissions, except for venting that is reasonably required for maintenance (though recordkeeping is required if actions are required to reduce maintenance emissions pursuant to Section II.H.2.), gauging (unless use of a storage tank measurement system is required pursuant to and the operator complies with Section II.C.4.), or safety of personnel and equipment.

II.C.3.c. The date and duration of any period where the air pollution control equipment is not operating.

II.C.3.d. Records of the inspections required in Sections II.C.1.d. and II.C.2.b.(ii), including the time and date of each inspection and a description of any problems observed, description and date of any corrective action(s) taken, and name of employee or third party performing corrective action(s).

II.C.3.e. Repealed (February 14, 2022).

II.C.3.f. The timing of and efforts made to eliminate venting, restore operation of air pollution control equipment, and mitigate visible emissions, including the dates

and results of action(s) taken and the monitoring used to confirm the action(s) were successful.

II.C.3.g. A list of equipment associated with the storage tank that is designated as unsafe, difficult, or inaccessible to monitor, as described in Section II.C.1.e., an explanation stating why the equipment is so designated, and the plan for monitoring such equipment.

II.C.3.h. Records of any exemption, and associated documentation, applied for under Section II.C.1.c.(iii).

II.C.4. (State Only) Storage tank measurement system requirements at well production facilities, natural gas compressor stations, and natural gas processing plants

II.C.4.a. Applicability

II.C.4.a.(i) The owners or operators of controlled storage tanks at well production facilities, natural gas compressor stations, or natural gas processing plants constructed on or after May 1, 2020, and at any facilities that are modified on or after May 1, 2020, such that an additional controlled storage vessel is constructed to receive an anticipated increase in throughput of hydrocarbon liquids or produced water, must use a storage tank measurement system to determine the quantity of liquids in the storage tank(s).

II.C.4.a.(ii) The owners or operators of controlled storage tanks at well production facilities, natural gas compressor stations, or natural gas processing plants constructed on or after January 1, 2021, and at any facilities that are modified on or after January 1, 2021, such that an additional controlled storage vessel is constructed to receive an anticipated increase in throughput of hydrocarbon liquids or produced water, must use a storage tank measurement system to determine the quality and quantity of liquids in the storage tank(s).

II.C.4.b. Owner or operators subject to the storage tank measurement system requirements in Section II.C.4.a., must keep thief hatches (or other access points to the tank) and pressure relief devices on storage tanks closed and latched during activities to determine the quality and/or quantity of liquids in the storage tank(s).

II.C.4.c. Operators may inspect, test, and/or calibrate the storage tank measurement system semi-annually, or as directed by the Bureau of Land Management (see 43 CFR Section 3174.6(b)(5)(ii)(B) (November 17, 2016)) or system manufacturer. Opening the thief hatch if required to inspect, test, or calibrate the system is not a violation of Section II.C.4.b.

II.C.4.d. The owner or operator must install signage at or near the storage tank that indicates which equipment and method(s) is used and the appropriate and necessary operating procedures for that system.

II.C.4.e. The owner or operator must develop and implement an annual training program for employees and/or third parties conducting activities subject to Section II.C.4. that includes, at a minimum, operating procedures for each type of system.

II.C.4.f. Owner or operators must retain records for at least two (2) years and make such records available to the Division upon request, including

- II.C.4.f.(i) Date of construction of the storage vessel or facility.
- II.C.4.f.(ii) Description of the storage tank measurement system used to comply with Section II.C.4.a.
- II.C.4.f.(iii) Date(s) of storage tank measurement system inspections, testing, and/or calibrations pursuant to Section II.C.4.c.
- II.C.4.f.(iv) Manufacturer specifications regarding storage tank measurement system inspections, and/or calibrations, if followed pursuant to Section II.C.4.c.
- II.C.4.f.(v) Records of the annual training program, including the date and names of persons trained.

II.C.5. (State Only) Storage tank hydrocarbon liquids loadout requirements at Class II disposal well facilities, well production facilities, natural gas compressor stations, and natural gas processing plants.

II.C.5.a. Owners or operators of well production facilities, natural gas compressor stations, and natural gas processing plants with a hydrocarbon liquids loadout to transport vehicles throughput of greater than or equal to 5,000 barrels per year on a rolling 12-month basis must control emissions from the loadout of hydrocarbon liquids from controlled storage tanks to transport vehicles by using (a) submerged fill and (b) a vapor collection and return system and/or air pollution control equipment.

Owners or operators of class II disposal well facilities with VOC emissions from hydrocarbon liquids loadout to transport vehicles greater than or equal to two (2) tons uncontrolled actual emissions per year on a rolling 12-month basis must control emissions from the loadout of hydrocarbon liquids from storage tanks to transport vehicles by using (a) submerged fill and (b) a vapor collection and return system and/or air pollution control equipment.

II.C.5.a.(i) Compliance with Section II.C.5. must be achieved in accordance with the following schedule

- II.C.5.a.(i)(A) Facilities constructed or modified on or after May 1, 2020, must be in compliance by commencement of operation.
- II.C.5.a.(i)(B) Facilities constructed before May 1, 2020, must be in compliance by May 1, 2021.
- II.C.5.a.(i)(C) Class II disposal well facilities constructed or modified on or after January 1, 2021, must be in compliance by commencement of operation.
- II.C.5.a.(i)(D) Class II disposal well facilities constructed before January 1, 2021, must be in compliance by May 1, 2021.

- II.C.5.a.(i)(E) Facilities not subject to Sections II.C.5.a.(i)(A) or II.C.5.a.(i)(B) that exceed the hydrocarbon liquids loadout to transport vehicles throughput of greater than or equal to 5,000 barrels per year on a rolling 12-month basis must control emissions from loadout upon exceeding the loadout threshold.
- II.C.5.a.(i)(F) Facilities not subject to Sections II.C.5.a.(i)(C) or II.C.5.a.(i)(D) that exceed the hydrocarbon liquids loadout to transport vehicles emissions threshold of greater than or equal to two (2) tons uncontrolled actual VOC emissions per year on a rolling 12-month basis must control emissions from loadout within sixty (60) days of the first day of the month after which loadout emissions exceeded the loadout threshold.
- II.C.5.a.(ii) Storage tanks must operate without venting at all times during loadout.
- II.C.5.a.(iii) The owner or operator must, as applicable:
 - II.C.5.a.(iii)(A) Install and operate the vapor collection and return equipment to collect vapors during the loadout of hydrocarbon liquids to tank compartments of outbound transport vehicles and to route the vapors to the storage tank or air pollution control equipment.
 - II.C.5.a.(iii)(B) Include devices to prevent the release of vapor from vapor recovery hoses not in use.
 - II.C.5.a.(iii)(C) Use operating procedures to ensure that hydrocarbon liquids cannot be transferred to transport vehicles unless the vapor collection and return system is in use.
 - II.C.5.a.(iii)(D) Operate all recovery and disposal equipment at a back-pressure less than the pressure relief valve setting of transport vehicles.
 - II.C.5.a.(iii)(E) The owner or operator must inspect onsite loading equipment to ensure that hoses, couplings, and valves are maintained to prevent dripping, leaking, or other liquid or vapor loss during loadout. These inspections must occur at least monthly, unless loadout occurs less frequently, then as often as loadout is occurring,
- II.C.5.a.(iv) Loadout observations and operator training
 - II.C.5.a.(iv)(A) The owner or operator must observe loadout to confirm that all storage tanks operate without venting when loadout operations are active. These inspections must occur at least monthly, unless loadout occurs less frequently, then as often as loadout is occurring,
 - II.C.5.a.(iv)(B) If observation of loadout is not feasible, the owner or operator must document the annual loadout frequency

and the reason why observation is not feasible and inspect the facility within 24 hours after loadout to confirm that all storage tank thief hatches (or other access point to the tank) are closed and latched.

II.C.5.a.(iv)(C) The owner or operator must install signage at or near the loadout control system that indicates which loadout control method(s) is used and the appropriate and necessary operating procedures for that system.

II.C.5.a.(iv)(D) The owner or operator must develop and implement an annual training program for employees and/or third parties conducting loadout activities subject to Section II.C.5. that includes, at a minimum, operating procedures for each type of loadout control system.

II.C.5.a.(v) Owners or operators must retain records for at least two (2) years and make such records available to the Division upon request.

II.C.5.a.(v)(A) Records of the annual facility hydrocarbon liquids loadout to transport vehicles throughput.

II.C.5.a.(v)(B) Inspections, including a description of any problems found and their resolution, required under Sections II.C.5.a.(iii) and II.C.5.a.(iv) must be documented in a log.

II.C.5.a.(v)(C) Records of the infeasibility of observation of loadout.

II.C.5.a.(v)(D) Records of the frequency of loadout.

II.C.5.a.(v)(E) Records of the annual training program, including the date and names of persons trained.

II.C.5.a.(v)(F) Records of class II disposal well facility VOC emissions from hydrocarbon liquids loadout to transport vehicles on a rolling 12-month basis.

II.C.5.a.(vi) Air pollution control equipment used to comply with this Section II.C.5. must comply with Section II.B., be inspected in accordance with Sections II.B.2.f.(ii)(A) through II.B.2.f.(ii)(D), and achieve a hydrocarbon control efficiency of 95%.

II.D. (State Only) Emission reductions from glycol natural gas dehydrators

II.D.1. Beginning May 1, 2008, still vents and vents from any flash separator or flash tank on a glycol natural gas dehydrator located at an oil and gas exploration and production operation, natural gas compressor station, or gas-processing plant subject to control requirements pursuant to Section II.D.2., shall reduce uncontrolled actual emissions of volatile organic compounds by at least 90 percent through the use of a condenser or air pollution control equipment.

II.D.2. The control requirement in Section II.D.1. apply where:

- II.D.2.a. Actual uncontrolled emissions of volatile organic compounds from the glycol natural gas dehydrator are equal to or greater than two tons per year; and
- II.D.2.b. The sum of actual uncontrolled emissions of volatile organic compounds from any single glycol natural gas dehydrator or grouping of glycol natural gas dehydrators at a single stationary source is equal to or greater than 15 tons per year. To determine if a grouping of dehydrators meets or exceeds the 15 tons per year threshold, sum the total actual uncontrolled emissions of volatile organic compounds from all individual dehydrators at the stationary source, including those with emissions less than two tons per year.
- II.D.3. Beginning May 1, 2015, still vents and vents from any flash separator or flash tank on a glycol natural gas dehydrator located at an oil and gas exploration and production operation, natural gas compressor station, or gas-processing plant subject to control requirements pursuant to Section II.D.4., shall reduce uncontrolled actual emissions of hydrocarbons by at least 95 percent on a rolling twelve-month basis through the use of a condenser or air pollution control equipment. If a combustion device is used, it shall have a design destruction efficiency of at least 98% for hydrocarbons, except where:
 - II.D.3.a. The combustion device has been authorized by permit prior to May 1, 2014; and
 - II.D.3.b. A building unit or designated outside activity area is not located within 1,320 feet of the facility at which the natural gas glycol dehydrator is located.
- II.D.4. The control requirement in Section II.D.3. apply where:
 - II.D.4.a. Uncontrolled actual emissions of VOCs from a glycol natural gas dehydrator constructed on or after May 1, 2015, are equal to or greater than two (2) tons per year. Such glycol natural gas dehydrators must be in compliance with Section II.D.3. by the date that the glycol natural gas dehydrator commences operation.
 - II.D.4.b. Uncontrolled actual emissions of VOCs from a single glycol natural gas dehydrator constructed before May 1, 2015, are equal to or greater than six (6) tons per year, or two (2) tons per year if the glycol natural gas dehydrator is located within 1,320 feet of a building unit or designated outside activity area.
 - II.D.4.c. For purposes of Sections II.D.3. and II.D.4.:
 - II.D.4.c.(i) Building Unit means a residential building unit, and every five thousand (5,000) square feet of building floor area in commercial facilities or every fifteen thousand (15,000) square feet of building floor area in warehouses that are operating and normally occupied during working hours.

- II.D.4.c.(ii) A Designated Outside Activity Area means an outdoor venue or recreation area, such as a playground, permanent sports field, amphitheater, or other similar place of public assembly owned or operated by a local government, which the local government had established as a designated outside activity area by the COGCC; or an outdoor venue or recreation area where ingress to or egress from could be impeded in the event of an emergency condition at an oil and gas location less than three hundred and fifty (350) feet from the venue due to the configuration of the venue and the number of persons known or expected to simultaneously occupy the venue on a regular basis.

II.E. (State Only) Leak detection and repair program for well production facilities and natural gas compressor stations

- II.E.1. The following provisions of Section II.E. apply in lieu of any directed inspection and maintenance program requirements established pursuant to Regulation Number 3, Part B, Section III.D.2.
- II.E.2. Owners or operators of well production facilities or natural gas compressor stations that monitor components as part of Section II.E. may estimate uncontrolled actual emissions from components for the purpose of evaluating the applicability of component fugitive emissions to Regulation Number 3 by utilizing the emission factors defined as less than 10,000 ppmv of Table 2-8 of the 1995 EPA Protocol for Equipment Leak Emission Estimates (Document EPA-453/R-95-017).
- II.E.3. Beginning January 1, 2015, owners or operators of natural gas compressor stations must inspect components for leaks using an approved instrument monitoring method, in accordance with the following schedule.
- II.E.3.a. Approved instrument monitoring method inspections must begin within ninety (90) days after January 1, 2015, or the date the natural gas compressor station commences operation if such date is after January 1, 2015, for natural gas compressor stations with fugitive VOC emissions greater than zero (0) but less than or equal to fifty (50) tons per year, based on a rolling twelve-month total.
- II.E.3.a.(i) Annual approved instrument monitoring method inspections at natural gas compressor stations with fugitive VOC emissions greater than zero (0) but less than or equal to twelve (12) tons per year, based on a rolling twelve-month total, must begin within ninety (90) days after January 1, 2015, or the date the natural gas compressor station commences operation if such date is after January 1, 2015. Annual inspections must be conducted through calendar year 2019.
- II.E.3.a.(ii) Beginning calendar year 2020, owners or operators of natural gas compressor stations with fugitive VOC emissions greater than zero (0) but less than or equal to twelve (12) tons per year, based on a rolling twelve-month total, must conduct semi-annual approved instrument monitoring method inspections.

II.E.3.a.(iii) Beginning January 1, 2023, owners or operators of natural gas compressor stations with fugitive VOC emissions greater than zero (0) but less than or equal to twelve (12) tons per year, based on a rolling twelve-month total, must conduct quarterly approved instrument monitoring method inspections.

II.E.3.b. Approved instrument monitoring method inspections must begin within thirty (30) days after January 1, 2015, or the date the natural gas compressor station commences operation if such date is after January 1, 2015, for natural gas compressor stations with fugitive VOC emissions greater than fifty (50) tons per year.

II.E.3.c. Following the first approved instrument monitoring method inspection, owners or operators must continue conducting approved instrument monitoring method inspections in accordance with the Inspection Frequency in Table 3.

II.E.3.d. Beginning January 1, 2023, owners or operators of natural gas compressor stations located within a disproportionately impacted community or within 1,000 feet of an occupied area must inspect components for leaks using an approved instrument monitoring method in accordance with the inspection frequency in Table 3.

II.E.3.e. For purposes of Section II.E.3., fugitive emissions must be calculated using the emission factors of Table 2-4 of the 1995 EPA Protocol for Equipment Leak Emission Estimates (Document EPA-453/R-95-017), or other Division approved method.

Table 3 – Natural Gas Compressor Station Component Inspections	
Fugitive VOC Emissions (rolling twelve-month tpy)	Inspection Frequency
> 0 and ≤ 12	Quarterly
> 0 and ≤ 50, located within a disproportionately impacted community or within 1,000 feet of an occupied area	Bimonthly
> 12 and ≤ 50	Quarterly
> 50	Monthly

II.E.4. Requirements for well production facilities

II.E.4.a. Owners or operators of well production facilities constructed on or after October 15, 2014, must identify leaks from components using an approved instrument monitoring method no sooner than fifteen (15) days and no later than thirty (30) days after the facility commences operation. This initial test constitutes the first, or only for facilities subject to a one time approved instrument monitoring method inspection, of the periodic approved instrument monitoring method inspections. Thereafter, approved instrument monitoring method and AVO inspections must be conducted in accordance with the Inspection Frequencies in Table 4.

- II.E.4.b. Owners or operators of well production facilities constructed before October 15, 2014, must identify leaks from components using an approved instrument monitoring method within ninety (90) days of the Phase-In Schedule in Table 4; within thirty (30) days for well production facilities subject to monthly approved instrument monitoring method inspections; or by January 1, 2016, for well production facilities subject to a one time approved instrument monitoring method inspection. Thereafter, approved instrument monitoring method and AVO inspections must be conducted in accordance with the inspection frequencies in Table 4.
- II.E.4.c. Beginning calendar year 2020, owners or operators of well production facilities with estimated uncontrolled actual VOC emissions greater than or equal to two (2) but less than or equal to twelve (12) tons per year as calculated in accordance with Section II.E.4.e., based on a rolling twelve-month total, must inspect components for leaks using an approved instrument monitoring method at least semi-annually.
- II.E.4.d. Beginning calendar year 2020, owners or operators of well production facilities with estimated uncontrolled actual VOC emissions greater than or equal to two (2) tons per year as calculated in accordance with Section II.E.4.g., based on a rolling twelve-month total, and located within 1,000 feet of an occupied area must inspect components for leaks using an approved instrument monitoring method in accordance with the inspection frequency in Table 4.
- II.E.4.e. Owners or operators of well production facilities must inspect components for leaks using an approved instrument monitoring method as follows, except as provided in Section II.E.4.f.
- II.E.4.e.(i) Beginning January 1, 2023, for well production facilities that commenced operation before May 1, 2022, in accordance with the inspection frequencies in Table 5.
- II.E.4.e.(ii) Well production facilities that commence operation on or after May 1, 2022, must be inspected at least monthly.
- II.E.4.f. Alternative inspection frequency requirements.
- Owners or operators of well production facilities in compliance with Sections II.E.4.f.(i) or II.E.4.f.(ii) must inspect components for leaks using an approved instrument monitoring method at least semi-annually or consistent with the inspection frequency in Table 4, whichever is more frequent, except that a well production facility with uncontrolled actual VOC emissions less than two (2) tons per year as of February 14, 2022, need only be inspected at least annually. Owners or operators must comply with all other requirements of Section II.E.
- II.E.4.f.(i) The owner or operator installs and operates an automatic pressure management and pilot light system, consistent with a Division-approved protocol, on each storage tank at a well production facility with storage tanks subject to the requirements of Section II.C. The Division-approved protocol must ensure that the automatic pressure management and pilot light system, as appropriate.

- II.E.4.f.(i)(A) Continuously tracks the pressure in the storage tank(s) and monitors the pilot light on combustion devices used as air pollution control equipment;
- II.E.4.f.(i)(B) Accurately identifies when storage tank pressure levels both drop and rise substantially to indicate venting (e.g., both when a thief hatch is open and when pressure rises above the level where venting might occur);
- II.E.4.f.(i)(C) Accurately identifies when a pilot light is out and subsequently re-lit;
- II.E.4.f.(i)(D) Will shut-in flow to the storage tank(s) under the circumstances in Sections II.E.4.f.(i)(B) and II.E.4.f.(i)(C);
- II.E.4.f.(i)(E) Triggers a site investigation by the owner or operator upon the occurrence of potential venting and pilot light outages; and
- II.E.4.f.(i)(F) Includes sufficient recordkeeping and reporting requirements to demonstrate compliance.
- II.E.4.f.(ii) The owner or operator uses only non-emitting pneumatic controllers, installs and operates a software system providing automated operational feedback to a central control system, and does not install and operate hydrocarbon liquid storage tanks (other than a maintenance tank) or natural gas-fired reciprocating internal combustion engines.

II.E.4.g. The estimated uncontrolled actual VOC emissions from the highest emitting storage tank at the well production facility determines the frequency at which inspections must be performed. If no storage tanks storing oil or condensate are located at the well production facility, owners or operators must rely on the facility emissions (controlled actual VOC emissions from all permanent equipment, including emissions from components determined by utilizing the emission factors defined as less than 10,000 ppmv of Table 2-8 of the 1995 EPA Protocol for Equipment Leak Emission Estimates).

Table 4 – Well Production Facility Component Inspections				
Thresholds (per II.E.4.g.)				
Well production facilities without storage tanks (rolling twelve-month tpy)	Well production facilities with storage tanks (rolling twelve-month tpy)	Approved Instrument Monitoring Method Inspection Frequency	AVO Inspection Frequency	Phase-In Schedule
> 0 and < 2	> 0 and < 2	One time	Monthly	January 1, 2016
≥ 2 and ≤ 12	≥ 2 and ≤ 12	Semi-annually	Monthly	* begins in 2020
> 2 and < 12, located within 1,000 feet of an occupied area	> 2 and < 12, located within 1,000 feet of an occupied area	Quarterly	Monthly	* begins in 2020
> 12 and ≤ 20	> 12 and ≤ 50	Quarterly	Monthly	January 1, 2015
> 12, located within 1,000 feet of an occupied area	> 12, located within 1,000 feet of an occupied area	Monthly		* begins in 2020
> 20	> 50	Monthly		January 1, 2015

Table 5 - Well Production Facility Component Inspections on or after January 1, 2023		
Thresholds (per II.E.4.g.)		
Well production facilities (rolling twelve-month tpy)	Approved Instrument Monitoring Method Inspection Frequency	AVO Inspection Frequency
> 0 and < 2	Annual	Monthly
> 0 and < 2, located within 1,000 feet of an occupied area	Semi-annual	Monthly
> 0 and < 2, located in the 8-hour ozone control area and within a disproportionately impacted community	Semi-annual	Monthly
≥ 2 and ≤ 50	Quarterly	Monthly
≥ 2 and ≤ 12, located within 1,000 feet of an occupied area or within a disproportionately impacted community	Bimonthly	Monthly
> 12, located within 1,000 feet of an occupied area or within a disproportionately impacted community	Monthly	
> 20, well production facilities without storage tanks	Monthly	
> 50, well production facilities with storage tanks	Monthly	

II.E.5. If a component is unsafe, difficult, or inaccessible to monitor, the owner or operator is not required to monitor the component until it becomes feasible to do so.

II.E.5.a. Difficult to monitor components are those that cannot be monitored without elevating the monitoring personnel more than two (2) meters above a supported surface or are unable to be reached via a wheeled scissor-lift or hydraulic type scaffold that allows access to components up to 7.6 meters (25 feet) above the ground.

II.E.5.b. Unsafe to monitor components are those that cannot be monitored without exposing monitoring personnel to an immediate danger as a consequence of completing the monitoring.

II.E.5.c. Inaccessible to monitor components are those that are buried, insulated, or obstructed by equipment or piping that prevents access to the components by monitoring personnel.

II.E.6. Leaks requiring repair: Leaks must be identified utilizing the methods listed in Section II.E.6. Only leaks from components exceeding the thresholds in Section II.E.6. require repair under Section II.E.7.

- II.E.6.a. For EPA Method 21 monitoring, at facilities constructed before May 1, 2014, repair is required for leaks with any concentration of hydrocarbon above 2,000 parts per million (ppm) not associated with normal equipment operation, such as pneumatic device actuation and crank case ventilation, except for well production facilities where a leak is defined as any concentration of hydrocarbon above 500 ppm not associated with normal equipment operation, such as pneumatic device actuation and crank case ventilation.
- II.E.6.b. For EPA Method 21 monitoring, at facilities constructed on or after May 1, 2014, repair is required for leaks with any concentration of hydrocarbon above 500 ppm not associated with normal equipment operation, such as pneumatic device actuation and crank case ventilation.
- II.E.6.c. For infra-red camera and AVO monitoring, repair is required for leaks with any detectable emissions not associated with normal equipment operation, such as pneumatic device actuation and crank case ventilation.
- II.E.6.d. For other Division approved instrument monitoring methods or programs, leak identification requiring repair will be established as set forth in the Division's approval.
- II.E.6.e. Except as provided in Sections II.E.6.f. or II.E.6.g., for leaks identified using an approved non-quantitative instrument monitoring method or AVO, owners or operators have the option of either repairing the leak in accordance with the repair schedule set forth in Section II.E.7.a. or conducting follow-up monitoring using EPA Method 21 within five (5) working days of the leak detection. If the follow-up EPA Method 21 monitoring shows that the emission is a leak requiring repair as set forth in Section II.E.6., the leak must be repaired in accordance with Section II.E.7.a. and remonitored in accordance with Section II.E.7.c.
- II.E.6.f. Beginning on March 1, 2021, for leaks identified using an approved non-quantitative instrument monitoring method or AVO at a well production facility located within 1,000 feet of an occupied area, owners or operators have the option of either repairing the leak in accordance with the repair schedule set forth in Section II.E.7.b. or conducting follow-up monitoring using EPA Method 21 within five (5) working days of the leak detection. If the follow-up EPA Method 21 monitoring shows that the emission is a leak requiring repair as set forth in Sections II.E.6.a. through II.E.6.d., the leak must be repaired as follows and remonitored in accordance with Section II.E.7.c.
 - II.E.6.f.(i) If EPA Method 21 indicates a leak greater than 500 ppm and less than 10,000 ppm hydrocarbons, the leak must be repaired in accordance with Section II.E.7.a.
 - II.E.6.f.(ii) If EPA Method 21 is not performed or indicates a leak greater than or equal to 10,000 ppm hydrocarbons, the leak must be repaired in accordance with Section II.E.7.b.

II.E.6.g. Beginning February 14, 2022, for leaks identified using an approved non-quantitative instrument monitoring method or AVO at a well production facility located within a disproportionately impacted community or at a well production facility inspected pursuant to Section II.E.4.f., owners or operators have the option of either repairing the leak in accordance with the repair schedule set forth in Section II.E.7.b. or conducting follow-up monitoring using EPA Method 21 within five (5) working days of the leak detection. If the follow-up EPA Method 21 monitoring shows that the emission is a leak requiring repair as set forth in Sections II.E.6.a. through II.E.6.d., the leak must be repaired as follows and remonitored in accordance with Section II.E.7.c.

II.E.6.g.(i) If EPA Method 21 indicates a leak greater than 500 ppm and less than 10,000 ppm hydrocarbons, the leak must be repaired in accordance with Section II.E.7.a.

II.E.6.g.(ii) If EPA Method 21 is not performed or indicates a leak greater than or equal to 10,000 ppm hydrocarbons, the leak must be repaired in accordance with Section II.E.7.b.

II.E.7. Repair and remonitoring

II.E.7.a. Except as provided in Section II.E.7.b., the first attempt to repair a leak must be made no later than five (5) working days after discovery and repair of a leak discovered on or after January 1, 2018, completed no later than thirty (30) working days after discovery, unless parts are unavailable, the equipment requires shutdown to complete repair, or other good cause exists.

II.E.7.a.(i) If parts are unavailable, they must be ordered promptly and the repair must be made within fifteen (15) working days of receipt of the parts.

II.E.7.a.(ii) If shutdown is required, a repair attempt must be made during the next scheduled shutdown and final repair completed within two (2) years after discovery.

II.E.7.a.(iii) If delay is attributable to other good cause, repairs must be completed within fifteen (15) working days after the cause of delay ceases to exist.

II.E.7.a.(iv) Beginning February 14, 2022, the owner or operator must take action(s) where technically feasible to mitigate emissions from leaks placed on delay of repair within no later than 48 hours of placing a leaking component on delay of repair.

II.E.7.b. For leaks requiring repair pursuant to Sections II.E.6.f. and II.E.6.g., the first attempt to repair must be made as soon as practicable but no later than five (5) working days after discovery and completed within five (5) working days after discovery. If repair is not completed within five (5) working days after discovery, the owner or operator must use other means to stop the leak including, but not limited to, isolating the component or shutting in the well, unless such other means will cause greater emissions.

II.E.7.b.(i) If the owner or operator cannot repair or stop the leak within five (5) working days after discovery, the owner or operator must notify the local government with jurisdiction over the location and the Division as soon as possible, but no later than seven (7) working days after the leak is discovered. The notice must include

II.E.7.b.(i)(A) Identification of the facility, the leaking component, and contact information of the owner or operator representative;

II.E.7.b.(i)(B) The concentration of hydrocarbons using EPA Method 21, if available;

II.E.7.b.(i)(C) Instructions to access the infrared camera video footage of the leak, if available;

II.E.7.b.(i)(D) The approximate distance of the facility to the closest occupied area that is not an outdoor area;

II.E.7.b.(i)(E) The basis for the delay of repair and justification for not isolating the component or shutting in the well; and

II.E.7.b.(i)(F) The estimated date of repair.

II.E.7.c. Within fifteen (15) working days of completion of a repair, the leak must be remonitored using an approved instrument monitoring method to verify that the repair was effective.

II.E.7.d. Leaks discovered pursuant to the leak detection methods of Section II.E.6. are not subject to enforcement by the Division unless the owner or operator fails to perform the required repairs in accordance with Section II.E.7. or keep required records in accordance with Section II.E.8.

II.E.8. Recordkeeping: The owner or operator of each facility subject to the leak detection and repair requirements in Section II.E. must maintain the following records for a period of two (2) years and make them available to the Division upon request.

II.E.8.a. Documentation of the initial approved instrument monitoring method inspection for new well production facilities;

II.E.8.b. The date, facility name, and facility AIRS ID or facility location if the facility does not have an AIRS ID for each inspection;

II.E.8.c. For each inspection, a list of the leaking components requiring repair and the monitoring method(s) used to determine the presence of the leak;

II.E.8.d. The date and result of any EPA Method 21 monitoring relied upon to demonstrate a leak is not subject to Section II.E.7.b.;

II.E.8.e. The date of first attempt to repair the leak and, if necessary, any additional attempt to repair the leak;

- II.E.8.f. The date the leak was repaired and for leaks discovered and repaired on or after January 1, 2018, the type of repair method applied;
- II.E.8.g. Documentation of actions taken pursuant to Section II.E.7.b. to stop a leak that was not repaired within five (5) working days after discovery or documentation that such actions would cause greater emissions;
- II.E.8.h. Copies of all notices submitted pursuant to Section II.E.7.b.(i) and the infrared camera video footage of leaks that required notice pursuant to Section II.E.7.b.(i);
- II.E.8.i. The delayed repair list, including the basis for placing leaks on the list;
 - II.E.8.i.(i) For leaks discovered on or after January 1, 2018, the delayed repair list must include the date and duration of any period where the repair of a leak was delayed due to unavailable parts, required shutdown, or delay for other good cause, the basis for the delay, and the schedule for repairing the leak. Delay of repair beyond thirty (30) days after initial discovery due to unavailable parts must be reviewed, and a record kept of that review, by a representative of the owner or operator with responsibility for leak detection and repair compliance functions. This review will not be made by the individual making the initial determination to place a part on the delayed repair list.
 - II.E.8.i.(ii) For leaks discovered after March 1, 2021, that require repair pursuant to Section II.E.7.b., the delayed repair list must include the date and duration of leaks for which repairs were not completed within five (5) working days after discovery, and the schedule for repairing the leak.
 - II.E.8.i.(iii) For leaks discovered after February 14, 2022, pursuant to Section II.E.6.g., that require repair pursuant to Section II.E.7.b., the delayed repair list must include the date and duration of leaks for which repairs were not completed within five (5) working days after discovery, and the schedule for repairing the leak, including, but not limited to, the date upon which necessary parts were ordered.
 - II.E.8.i.(iv) For leaks discovered after February 14, 2022, the delayed repair list must include a description of action(s) taken to mitigate the emissions from the leak or the reasons why mitigation was not technically feasible, as required under Section II.E.7.a.(iv).
- II.E.8.j. The date the leak was remonitored and the results of the remonitoring;
- II.E.8.k. A list of components that are designated as unsafe, difficult, or inaccessible to monitor, as described in Section II.E.5., an explanation stating why the component is so designated, and the schedule for monitoring such component(s); and
- II.E.8.l. Documentation of the owner or operator's proximity analysis, if applicable, including the date of the initial and any subsequent analysis and a description of the methodology used for the analysis.

II.E.9. Reporting. The owner or operator of each facility subject to the leak detection and repair requirements in Section II.E. must submit a single annual report using the Division-approved format on or before May 31st of each year (beginning May 31st, 2019) that includes, at a minimum, the following information regarding leak detection and repair activities at their subject facilities conducted the previous calendar year:

II.E.9.a. The total number of well production facilities and total number of natural gas compressor stations inspected;

II.E.9.b. The total number of inspections performed per inspection frequency tier of well production facilities and inspection frequency tier of natural gas compressor stations;

II.E.9.c. The total number of identified leaks requiring repair, broken out by component type, monitoring method, and inspection frequency tier of well production facilities, as reported in Section II.E.9.b., or inspection frequency tier of natural gas compressor stations;

II.E.9.d. The total number of leaks repaired for each inspection frequency tier of well production facilities, as reported in Section II.E.9.b., or inspection frequency tier of natural gas compressor stations;

II.E.9.e. The total number of leaks on the delayed repair list as of December 31st broken out by component type, inspection frequency tier of well production facilities, as reported in Section II.E.9.b., or inspection frequency tier of natural gas compressor stations, and the basis for each delay of repair. This total does not include leaks that have been stopped through other means, as specified in Section II.E.7.b.;

II.E.9.f. The record of all reviews conducted for delayed repairs due to unavailable parts extending beyond 30 days for the previous calendar year; and

II.E.9.g. Each report must be accompanied by a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete

II.F. Control of emissions from well production facilities.

Well Operation and Maintenance:

II.F.1. On or after August 1, 2014, gas coming off a separator, produced during normal operation from any newly constructed, hydraulically fractured, or recompleted oil and gas well, must either be routed to a gas gathering line or controlled from commencement of operation by air pollution control equipment that achieves an average hydrocarbon control efficiency of 95%.

II.F.2. On or after February 14, 2022, gas coming off a separator, produced during normal operation from any oil and gas well, must either be routed to a gas gathering line or controlled by air pollution control equipment that achieves a hydrocarbon control efficiency of 95%, unless emitting to the atmosphere is authorized pursuant to a variance issued by the Colorado Oil and Gas Conservation Commission.

II.F.3. If a combustion device is used, it must have a design destruction efficiency of at least 98% for hydrocarbons.

- II.G. (State Only) Emission reductions from downhole well maintenance, well liquids unloading events, and well plugging activities.
- II.G.1. Beginning May 1, 2014, owners or operators must use best management practices to minimize hydrocarbon emissions and the need for emissions from the well associated with downhole well maintenance, well liquids unloading, and well plugging (beginning January 31, 2020), unless emitting is necessary for safety. The emitting as necessary for safety exemption does not apply to Section II.G.1.c.
- II.G.1.a. Prior to January 1, 2023, during liquids unloading events, any means of creating differential pressure must first be used to attempt to unload the liquids from the well without emitting. If these methods are not successful in unloading the liquids from the well, the well may emit in order to create the necessary differential pressure to bring the liquids to the surface.
- II.G.1.b. The owner or operator must be present on-site during any planned downhole well maintenance, well liquids unloading, or well plugging event and must ensure that any emissions from the well associated with the event are limited to the maximum extent practicable.
- II.G.1.c. Beginning January 1, 2023, for all downhole well maintenance and well liquids unloading activities with emissions to atmosphere, owners or operators must, consistent with well site conditions and good engineering practices
- II.G.1.c.(i) Use best engineering practices in the design and construction of oil and gas wells and well production facilities that commence operation after January 1, 2023, to minimize the need for well liquids unloading with emissions to atmosphere and other downhole well maintenance as the well ages.
- II.G.1.c.(ii) Attempt to create differential pressure to unload the liquids from the well without emitting.
- II.G.1.c.(iii) Monitor wellhead pressure and/or flow rate of the vented natural gas.
- II.G.1.c.(iv) Equalize the wellhead pressure with the production separator pressure prior to conducting unloading, swabbing, or maintenance activities, when practicable.
- II.G.1.c.(v) Close wellhead vents to the atmosphere or otherwise end direct emission of natural gas to atmosphere as soon as practicable.
- II.G.1.c.(vi) Minimize emissions to atmosphere from well liquids unloading and well swabbing, through the installation, use, and optimization of artificial lift, such as plunger lift with smart automation, except
- II.G.1.c.(vi)(A) Artificial lift is not required where an operator demonstrates to the Division that installation and use of artificial lift is technically infeasible on a well because of the structure of the well.
- II.G.1.c.(vi)(B) Smart automation is not required where an operator demonstrates to the Division that use of smart automation is technically infeasible.

- II.G.1.c.(vi)(C) Artificial lift is not required on a well drilled after February 14, 2022, until that well begins requiring regular liquids unloading operations. The owner or operator must install artificial lift at such well no later than twelve months after the well commences operation.
- II.G.1.c.(vi)(D) The Division can approve an alternative to artificial lift if the owner or operator demonstrates that use of artificial lift would result in an emissions increase or other environmental disbenefit.
- II.G.1.d. Beginning January 1, 2023, unless exempted in Sections II.G.1.d.(i) or II.G.1.d.(ii), owners or operators must use capture and recovery techniques or install and use a control device to achieve at least 95% control of hydrocarbon emissions during well liquids unloading and well swabbing operations. Notwithstanding any provision in Section II.B. to the contrary, owners or operators may use open flares and portable combustion devices to comply with this Section II.G.1.d.
 - II.G.1.d.(i) Owners or operators are not required to use control devices during well swabbing operations if pressurized equipment is used such that hydrocarbons are not emitted to the atmosphere from the well swabbing operation.
 - II.G.1.d.(ii) Owners or operators are not required to capture or control emissions during well liquids unloading and well swabbing operations if, during the preceding rolling twelve-month period
 - II.G.1.d.(ii)(A) The well production facility is located within a disproportionately impacted community and the operator did not conduct more than or equal to six (6) well liquids unloading and well swabbing events with emissions to atmosphere during any rolling six-month period.
 - II.G.1.d.(ii)(B) The well production facility is not located within a disproportionately impacted community and did not have any single well with more than or equal to six (6) well liquids unloading and well swabbing events with emissions to atmosphere during any rolling six-month period or any well(s), in the aggregate, with more than or equal to ten (10) well liquids unloading events and well swabbing with emissions to atmosphere during any rolling six-month period.
 - II.G.1.d.(ii)(C) Capturing or controlling the emissions from the well liquids unloading or well swabbing event is technically infeasible, as approved by the Division.

- II.G.1.d.(iii) Well liquids unloading events are not included in the calculation for purposes of Section II.G.1.d.(ii) where the need for well liquids unloading resulted from the infiltration of excess water directly caused by a nearby hydraulic fracturing event provided that the owner of the well to be unloaded provides the Division with at least 48 hours written notice (or as soon as possible prior to conducting well liquids unloading if 48 hours' notice would require an alternative or extended well liquids unloading practice that increases emissions) of the intent to begin unloading and the unloading activities are completed within thirty (30) days of commencement of those activities. The notice must include an identification of the operator that conducted the fracturing event suspected of contributing to the infiltration of water and the well API number(s) of the well that was fractured.

II.G.2. Recordkeeping

II.G.2.a. Through January 31, 2020, the owner or operator must keep records of the cause, date, time, and duration of venting events under Section II.G. Records must be kept for two (2) years and made available to the Division upon request.

II.G.2.b. Beginning January 31, 2020, or the date specified in Section II.G.2.b.(iii), the owner or operator must keep the following records for two (2) years and make records available to the Division upon request.

- II.G.2.b.(i) The cause of emissions (i.e., downhole well maintenance, well liquids unloading, well plugging), date, time, and duration of emissions under Section II.G.
- II.G.2.b.(ii) The best management practices used to minimize hydrocarbon emissions or the safety needs that prevented the use of best management practices.
- II.G.2.b.(iii) Beginning July 1, 2020, the emissions associated with well liquids unloading, downhole well maintenance, and well plugging.

II.G.2.c. Beginning January 1, 2023, in addition to the records in Section II.G.2.b., the owner or operator must keep the following records for five (5) years and make records available to the Division upon request.

- II.G.2.c.(i) The volume of gas vented during each downhole well maintenance, well liquids unloading and well swabbing, and well plugging event.
- II.G.2.c.(ii) The type of artificial lift used to reduce emissions pursuant to Section II.G.1.c.(vi); the number of well liquids unloading and well swabbing events resulting in emissions to atmosphere; or, if applicable, documentation of the justification for not having artificial lift under Section II.G.1.c.(vi). If plunger lift is installed, the number of cycles of the plunger.

- II.G.2.c.(iii) Whether the well liquids unloading or well swabbing event was controlled pursuant to Section II.G.1.d. and, if not, the justification for the exemption under Sections II.G.1.d.(i) or II.G.1.d.(ii), including all records relating to Section II.G.1.d.(iii) and records of production during the 30-day time period covered by Section II.G.1.d.(iii) and an estimate of the VOC and methane emissions during that same 30-day time period associated with the well liquids unloading or well maintenance activities.

II.G.3. Reporting

II.G.3.a. The owner or operator must submit a single annual report using a Division-approved format on or before June 30th of each year (beginning June 30th, 2021) that includes the following information regarding each downhole well maintenance, well liquids unloading, and well plugging event conducted the previous calendar year that resulted in emissions.

- II.G.3.a.(i) The API number of the well and the AIRS number of any associated storage tanks.
- II.G.3.a.(ii) Whether the emissions occurred due to downhole well maintenance, well liquids unloading, well swabbing, or well plugging.
- II.G.3.a.(iii) The date, time, and duration of the downhole well maintenance, well liquids unloading, or well plugging event, and, beginning with the annual report for calendar year 2023 whether the event was controlled.
- II.G.3.a.(iv) The best management practices used to minimize emissions, including the method used pursuant to Section II.G.1.c.(vi) beginning January 1, 2023.
- II.G.3.a.(v) Safety needs that prevented the use of best management practices to minimize emissions, if applicable.
- II.G.3.a.(vi) An estimate of the volume of natural gas, VOC, NO_x, N₂O, CO₂, CO, ethane, and methane emitted from the well associated with well liquid unloading activities, downhole well maintenance, and well plugging event and the emission factor or calculation methodology used to determine the volume of natural gas and emissions.
- II.G.3.a.(vii) Beginning with the annual report submitted June 30th of 2023 (for calendar year 2022), whether the well identified in Section II.G.3.a.(i) is equipped with artificial lift.

II.H. (State Only) Emission reductions from midstream segment pigging operations and blowdowns of piping and equipment.

II.H.1. Pigging operations and blowdowns of piping and equipment located at natural gas compressor stations and natural gas processing plants.

- II.H.1.a. Consistent with the schedule for compliance in Section II.H.1.c., at natural gas compressor stations and natural gas processing plants in disproportionately impacted communities, midstream segment owners or operators must capture and recover hydrocarbon emissions from
- II.H.1.a.(i) Pigging units attached to a high-pressure pigging pipeline with an outside diameter of twelve (12) inches or greater.
 - II.H.1.a.(ii) Pigging units with annual uncontrolled actual emissions equal to or greater than 0.5 tpy VOC or 1 tpy methane on a rolling 12-month basis, consistent with a Division-accepted method of calculation.
 - II.H.1.a.(iii) Blowdowns of compressors, where total uncontrolled actual blowdown emissions from all compressors are greater than or equal to 0.75 tpy VOC or 1.5 tpy methane on a rolling 12-month basis, consistent with a Division-accepted method of calculation. Hydrocarbons emitted during a compressor blowdown event where the physical volume of the compressor is less than fifty (50) cubic feet (cf) are not included in the emissions calculated for purposes of applicability of this Section II.H.1.a.(iii), provided the owner or operator maintains records of the dates and number of such events.
 - II.H.1.a.(iv) Blowdowns of all equipment and piping not covered by Sections II.H.1.a.(i) through II.H.1.a.(iii) where the physical volume between isolation valves is greater than or equal to fifty (50) cf. This requirement does not apply if the owner or operator can demonstrate that the aggregate uncontrolled actual emissions from blowdowns of all equipment and piping subject to this Section II.H.1.a.(iv) are less than 0.75 tpy VOC and 1.5 tpy methane, provided the owner or operator maintains records of the dates and number of all blowdowns including blowdowns where the physical volume between isolation valves is greater than one (1) cf but less than fifty (50) cf.
- II.H.1.b. Consistent with the schedule for compliance in Section II.H.1.c., at all natural gas compressor stations and natural gas processing plants not located in a disproportionately impacted community, midstream segment owners or operators must capture and recover hydrocarbon emissions from
- II.H.1.b.(i) Pigging units attached to high-pressure pigging pipelines with an outside diameter of twelve (12) inches or greater.
 - II.H.1.b.(ii) Pigging units with annual uncontrolled actual emissions equal to or greater than 1 tpy VOC or 2 tpy methane on a rolling 12-month basis, consistent with a Division-accepted method of calculation.

II.H.1.b.(iii) Blowdowns of compressors, where total uncontrolled actual blowdown emissions from all compressors are greater than or equal to 1 tpy VOC or 2 tpy methane on a rolling 12-month basis, consistent with a Division-accepted method of calculation. Hydrocarbons emitted during a compressor blowdown event where the physical volume of the compressor is less than fifty (50) cf are not included in the emissions calculated for purposes of applicability of this Section II.H.1.b.(iii), provided the owner or operator maintains records of the dates and number of such events.

II.H.1.b.(iv) Blowdowns of equipment and piping not covered by Sections II.H.1.b.(i) through II.H.1.b.(iii) where the physical volume between isolation valves is greater than or equal to fifty (50) cf. This requirement does not apply if the owner or operator can demonstrate that the aggregate uncontrolled actual emissions from blowdowns of all equipment and piping subject to this Section II.H.1.a.(iv) are less than 1 tpy VOC and 2 tpy methane, provided the owner or operator maintains records of the dates and number of all blowdowns including blowdowns where the physical volume between isolation valves is greater than one (1) cf but less than fifty (50) cf.

II.H.1.c. Schedule for compliance with Sections II.H.1.a. and II.H.1.b. Midstream segment owners or operators must be in compliance

II.H.1.c.(i) Upon commencement of operation for any natural gas compressor station or natural gas processing plant that commences operation on or after February 14, 2022.

II.H.1.c.(ii) By January 1, 2023, at no less than fifty percent (50%) of natural gas compressor stations and natural gas processing plants that commenced operation before February 14, 2022, and that are located within a disproportionately impacted community.

II.H.1.c.(iii) By June 1, 2023, at all natural gas compressor stations and natural gas processing plants that commenced operation before February 14, 2022, and that are located within a disproportionately impacted community.

II.H.1.c.(iv) By January 1, 2024, for all natural gas compressor stations and natural gas processing plants that commenced operation before February 14, 2022.

II.H.1.c.(v) Within sixty (60) days of the first day of the month after which a pigging unit in a disproportionately impacted community not subject to Sections II.H.1.a.(i) or (ii) increases hydrocarbon emissions to 0.5 tpy VOC or 1 tpy methane after the applicable compliance date in Sections II.H.1.c.(i) through II.H.1.c.(iv), on a rolling twelve-month basis.

- II.H.1.c.(vi) Within sixty (60) days of the first day of the month after which a pigging unit not located in a disproportionately impacted community and not subject to Sections II.H.1.b.(i) or II.H.1.b.(ii) that increases hydrocarbon emissions to 1 tpy VOC or 2 tpy methane after the applicable compliance date in Sections II.H.1.c.(i) through II.H.1.c.(iv), on a rolling twelve-month basis.
- II.H.1.c.(vii) Within sixty (60) days of the first day of the month after which blowdowns of compressors or other equipment and piping with a physical volume of the compressor or between isolation valves of equal to or greater than 50 cf located at a natural gas compressor station or natural gas processing plant located in a disproportionately impacted community not subject to Sections II.H.1.a.(iii) or II.H.1.a.(iv) increases hydrocarbon emissions to 0.75 tpy VOC or 1.5 tpy methane after the applicable compliance date in Section II.H.1.c.(i)-(iv), on a rolling twelve-month basis.
- II.H.1.c.(viii) Within sixty (60) days of the first day of the month after which blowdowns of compressors or other equipment and piping with a physical volume of the compressor or between isolation valves of equal to or greater than 50 cf located at a natural gas compressor station or natural gas processing plant not located in a disproportionately impacted community not subject to Sections II.H.1.b.(iii) or II.H.1.b.(iv) increases hydrocarbon emissions to 1 tpy VOC or 2 tpy methane after the applicable compliance date in Sections II.H.1.c.(i) through II.H.1.c.(iv), on a rolling twelve-month basis.
- II.H.1.c.(ix) An owner or operator may request an extension of the compliance schedules in Sections II.H.1.c.(ii) through II.H.1.c.(iv) for no more than twelve (12) months. The Division may approve such request if the owner or operator demonstrates that the extension is required to facilitate coordinated engineering and design projects to holistically address compliance with Section II.H. in order to avoid temporary solutions and emissions disbenefits, if any, that may be caused by the compliance schedules in Sections II.H.1.c.(ii) through II.H.1.c.(iv).
- II.H.1.d. Midstream owners or operators must capture and recover hydrocarbon emissions from pigging units that commence operation after February 14, 2022, where the pigging unit is attached to a high-pressure pigging line.
- II.H.2. Pigging operations at standalone pigging stations.
 - II.H.2.a. Midstream segment owners or operators must capture and recover hydrocarbon emissions from the following pigging operations at standalone pigging stations that commence operation on or after February 14, 2022.
 - II.H.2.a.(i) Pigging units attached to a high-pressure pigging pipeline.
 - II.H.2.a.(ii) Pigging units located in a disproportionately impacted community with annual uncontrolled actual emissions equal to or greater than 0.5 tpy VOC or 1 tpy methane on a rolling 12-month basis, consistent with a Division-accepted method of calculation.

II.H.2.a.(iii) Pigging units not located in a disproportionately impacted community with annual uncontrolled actual emissions greater than or equal to 1 tpy VOC or 2 tpy methane on a rolling 12-month basis, consistent with a Division-accepted method of calculation.

II.H.2.b. Beginning January 1, 2023, at standalone pigging stations that commenced operation before February 14, 2022, located within a disproportionately impacted community, midstream segment owners or operators must capture and recover hydrocarbon emissions from pigging operations

II.H.2.b.(i) At pigging units with annual uncontrolled actual emissions equal to or greater than 0.5 tpy VOC or 1 tpy methane on a rolling 12-month basis, consistent with a Division-accepted method of calculation.

II.H.2.b.(ii) Where the pigging unit is attached to a high-pressure pigging pipeline with an outside diameter of twelve (12) inches or greater.

II.H.2.b.(iii) A pigging unit not subject to Section II.H.2.b.(i) as of January 1, 2023, that increases hydrocarbon emissions to 0.5 tpy VOC or 1 tpy methane must be in compliance with Section II.H.2.b, within sixty (60) days of the first day of the month after which the emissions exceeded the applicable threshold, based on a rolling twelve-month basis.

II.H.2.c. Beginning January 1, 2024, at standalone pigging stations that commenced operation before February 14, 2022, that are not in a disproportionately impacted community, midstream segment owners or operators must capture and recover hydrocarbon emissions from pigging operations

II.H.2.c.(i) At pigging units with annual uncontrolled actual emissions equal to or greater than 1 tpy VOC or 2 tpy methane on a rolling 12-month basis, consistent with a Division-accepted method of calculation.

II.H.2.c.(ii) Where the pigging unit is attached to a high-pressure pigging pipeline with an outside diameter of twelve (12) inches or greater.

II.H.2.c.(iii) A pigging unit not subject to Section II.H.2.c.(i) as of January 1, 2024, that increases hydrocarbon emissions to 1 tpy VOC or 2 tpy methane must be in compliance with Section II.H.2.c. within sixty (60) days of the first day of the month after which the emissions exceeded the applicable threshold, based on a rolling twelve-month basis.

II.H.3. Capture and recovery requirements.

II.H.3.a. Capture and recovery requirements apply during normal operation.

II.H.3.b. Capture and recovery requirements do not apply during planned emergency system shutdown testing operations.

- II.H.3.c. Capture and recovery is not required pursuant to Sections II.H.1.a.(iv) or II.H.1.b.(iv) for blowdowns of storage vessels; pressure vessels; or process vessels such as surge vessels, bottom receivers, or knockout vessels, that operate at a pressure less than twenty (20) psig.
- II.H.3.d. Residual emission from depressurization of the blowdown volume remaining after capture and recovery techniques have been implemented are considered in compliance with the capture and recovery requirements of Sections II.H.1. and II.H.2.
- II.H.3.e. Where a natural gas compressor station or natural gas processing plant is connected to an electrical grid, capture and recovery techniques must be powered by non-emitting equipment, where technically and economically feasible. If technically or economically infeasible, the midstream owner or operator will maintain a record of the analysis undertaken at the time the pigging unit or piping and equipment became subject to Section II.H.1.
- II.H.3.f. If capture and recovery of the hydrocarbon emissions emitted is not feasible, the owner or operator may request Division approval to use a control device to comply with Sections II.H.1. or II.H.2. The Division may approve the use of open flares to control hydrocarbon emissions from pigging operations and blowdowns under Sections II.H.1. or II.H.2. Any Division approval will include appropriate operating and maintenance requirements for the control device utilized.
- II.H.3.f.(i) Pigging operations and blowdowns that are minimized through the use of a control device or closed-vent system as of February 14, 2022, or for which a permit application is pending to require the use of a control device or closed-vent system, as of December 31, 2021, do not need further Division approval to continue use of the control device or closed-vent system for purposes of Sections II.H.1. or II.H.2. The owner or operator utilizing control devices under this Section II.H.3.f.(i) must notify the Division by March 31, 2022, that control devices will be used to comply with Sections II.H.1. or II.H.2.
- II.H.3.g. Midstream owners or operators must design and operate natural gas compressor stations, natural gas processing plants, and standalone pigging stations that commence operation on or after January 1, 2023, to maximize the capture and recovery of hydrocarbon emissions from pigging operations and equipment and piping routinely blown down based on technologies and capabilities that are technically and economically feasible at the time of facility development. Midstream owners or operators must maintain a record of the analysis undertaken at the time of facility development pursuant to this section for the life of the facility.
- II.H.4. Beginning January 1, 2023, midstream segment owners or operators must utilize best practices to minimize emissions from pigging operations and blowdowns during normal operations, including all stand-alone pigging stations and midstream pipelines not located within the boundaries of a natural gas compressor station or natural gas processing plant, including
- II.H.4.a. Keeping pipeline access openings to the atmosphere on the pig receiver closed at all times except when a pig is being placed into or removed from the receiver or during active pipeline maintenance activities.

- II.H.4.b. In the 8-hour ozone control area and northern Weld County, utilizing a liquids management system to reduce the accumulation of liquids in the pigging unit. A liquids management system to include, but is not limited to, use of a pig ramp, process drain, pig receiver on an incline, or a closed liquids containment system.
- II.H.4.c. Where feasible for pipeline blowdowns other than for pigging operations, rerouting gas to the low-pressure system using existing piping connections between high- and low-pressure systems, temporarily resetting or bypassing pressure regulators to reduce system pressure prior to maintenance, or installing temporary connections between high- and low-pressure systems.
 - II.H.4.c.(i) For purposes of Section II.H.4.c., feasibility requires that a low-pressure line be nearby, be owned or operated by the same midstream owner or operator, and be on contiguous property owned or operated by the midstream owner or operator. Feasibility here also means that the action is economically feasible.
 - II.H.4.c.(ii) The Division can approve alternatives to the best practices in Section II.H.4.c. where the owner or operator demonstrates that the alternatives will achieve equivalent or better emission reductions.
- II.H.4.d. Creating or updating operating and maintenance plans to provide for the use, where practicable, of the following best practices. The operating and maintenance plan must describe the situations and circumstances where use of the best practice is, and is not, practicable, and must identify the documentation that will enable the Division to confirm whether the best practice was used consistently with the operating and maintenance plan.
 - II.H.4.d.(i) Using short pig barrels, where it reduces the gas volume for potential release.
 - II.H.4.d.(ii) Planning for venting-reduction steps, such as pipeline pump-downs techniques (e.g., in-line compressors, portable compressors, ejector), when large vessels and pipelines need to be isolated and depressurized.
 - II.H.4.d.(iii) Minimizing the volume that must be released. For example, adding stops to isolate a smaller section of a pipeline to reduce the length of pipe that must be vented.
 - II.H.4.d.(iv) Using inert gases and pigs to perform pipeline purges.
 - II.H.4.d.(v) Hot tapping to make new connections to pipelines.
 - II.H.4.d.(vi) Coordinating operational repairs and routine maintenance to minimize the number of emissions events and volume.
- II.H.5. Recordkeeping. The owner or operator must maintain records for a period of five (5) years and make them available to the Division upon request, including:

II.H.5.a. General records.

- II.H.5.a.(i) If subject to Sections II.H.1.a. or II.H.1.b., documentation of the methods used to comply with Sections II.H.1.a. or II.H.1.b. If exempt from Sections II.H.1.a. or II.H.1.b., documentation supporting the exemption.
- II.H.5.a.(ii) If control equipment is used to comply with Sections II.H.1.a., II.H.1.b., or II.H.1.d., documentation of operating and maintenance activities, and the date and duration of any control equipment downtime during active pigging operations or blowdowns.
- II.H.5.a.(iii) Documentation of best practices employed pursuant to Section II.H.4., including any operating and maintenance plans created, updated, or revised under Section II.H.4.d. and the records documenting compliance therewith.

II.H.5.b. Records of pigging operations.

- II.H.5.b.(i) The number of pigging events, whether or not subject to capture or control, including the locations of the pigging event, associated pigging units and facility(ies) (including AIRS ID, if applicable); date and time; diameter and normal operating pressure of pigging pipeline; pressure of pigging unit immediately before and after pigging operations (or after capture and recovery if applicable); volume of gas recovered and released; and type and volume of liquid removed from the pigging unit after pigging operations, if any.
- II.H.5.b.(ii) The monthly and annual VOC and methane emissions associated with the pigging operations, in accordance with Division-approved calculation methodology, including the VOC and methane weight percent composition of the fluid transported by the pigging pipeline at normal pipeline operating conditions used in the calculations and the date and location of the sample, or other justification of representative composition data.

II.H.5.c. Records of blowdowns.

- II.H.5.c.(i) The location (by equipment, facility, and AIRS ID, or by equipment and coordinates if no AIRS ID), date and time of blowdown event.
- II.H.5.c.(ii) The monthly and annual VOC and methane emissions from blowdowns, aggregated by equipment blown-down.
- II.H.5.c.(iii) The date, location, identification of equipment or piping and number of blowdown events (other than pigging operations), including identification of whether the volume between isolation valves is less than 50 cf.

II.I. (State Only) Control of emissions from natural gas-processing plants

II.I.1. Beginning January 1, 2023, owners or operators of natural gas-processing plants that are not subject to the requirements of Section I.G. must comply with the leak detection and repair (LDAR) program as provided at 40 CFR Part 60, Subpart OOOOa (June 3, 2016) unless subject to the LDAR program provided at 40 CFR Part 60, Subpart OOOO (August 16, 2012). In addition,

II.I.1.a. The owner or operator must complete repair of components placed on delay of repair within two (2) years or the applicable timeline provided in 40 CFR Part 60, Subpart OOOO (August 16, 2012) or 40 CFR Part 60, Subpart OOOOa (June 3, 2016), whichever is earlier.

II.I.1.b. The owner or operator must take action(s) to mitigate emissions from leaks placed on delay of repair where technically feasible.

III. Natural Gas-Actuated Pneumatic Controllers Associated with Oil and Gas Operations

III.A. Applicability

This section applies to pneumatic controllers that are actuated by natural gas, and located at, or upstream of natural gas processing plants (upstream activities include: oil and gas exploration and production operations and natural gas compressor stations).

III.B. Definitions

III.B.1. "Affected Operations" means pneumatic controllers that are actuated by natural gas, and located at, or upstream of natural gas processing plants (upstream activities include: oil and gas exploration and production operations and natural gas compressor stations).

III.B.2. "Continuous Bleed" means a continuous bleed rate of natural gas from a pneumatic controller that is designed to bleed natural gas continuously.

III.B.3. "Custody Transfer" means the transfer of crude oil or natural gas after processing and/or treatment in the producing operations or from storage vessels or automatic transfer facilities or other such equipment, including product loading racks, to pipelines or any other forms of transportation.

III.B.4. (State Only) "Enhanced Response" means to return a pneumatic controller to proper operation and includes but is not limited to, cleaning, adjusting, and repairing leaking gaskets, and seals; tuning to operate over a broader range of proportional band; and eliminating unnecessary valve positioners.

III.B.5. "High-Bleed Pneumatic Controller" means a continuous bleed pneumatic controller that is designed to have a continuous bleed rate that emits in excess of 6 standard cubic feet per hour (scfh) of natural gas to the atmosphere.

III.B.6. (State Only) "Intermittent pneumatic controller" means a pneumatic controller that is not designed to have a continuous bleed rate, but is designed to only release natural gas to the atmosphere as part of the actuation cycle.

III.B.7. "Low-Bleed Pneumatic controller" means a continuous bleed pneumatic controller that is designed to have a continuous bleed rate that emits less than or equal to 6 scfh of natural gas to the atmosphere.

- III.B.8. "Natural Gas Processing Plant" means any processing site engaged in the extraction of natural gas liquids from field gas, fractionation of mixed natural gas liquids to natural gas products, or both. A Joule-Thompson valve, a dew point depression valve, or an isolated or standalone Joule-Thompson skid is not a natural gas processing plant.
- III.B.9. "No-Bleed Pneumatic Controller" means any pneumatic controller that is not using hydrocarbon gas as the valve's actuating gas.
- III.B.10. "Non-emitting Controller" means a device that monitors a process parameter such as liquid level, pressure or temperature and sends a signal to a control valve in order to control the process parameter and does not emit natural gas to the atmosphere. Examples of non-emitting controllers include but are not limited to: no-bleed pneumatic controllers, electric controllers, mechanical controllers and routed pneumatic controllers.
- III.B.11. "Pneumatic Controller" means a device that monitors a process parameter such as liquid level, pressure, or temperature and uses pressurized gas (which may be released to the atmosphere during normal operation) to send a signal to a control valve in order to control the process parameter. Controllers that do not utilize pressurized gas are not pneumatic controllers.
- III.B.12. "Routed Pneumatic Controller" means a pneumatic controller that releases natural gas to a process, sales line or to a combustion device instead of directly to the atmosphere.
- III.B.13. "Self-contained Pneumatic Controller" means a pneumatic controller that releases gas to a process or sales line instead of to the atmosphere.
- III.B.14. "Wellhead" means the piping, casing, tubing and connected valves supporting or controlling the operation of an oil and/or natural gas well. The wellhead does not include other process equipment at the wellhead site.

III.C. Emission Reduction Requirements

Owners and operators of affected operations shall reduce emissions of volatile organic compounds from pneumatic controllers associated with affected operations as follows:

- III.C.1. Continuous bleed, natural gas-driven pneumatic controllers in the 8-Hour Ozone Control Area or northern Weld County and located from the wellhead to the natural gas processing plant or point of custody transfer to an oil pipeline:
- III.C.1.a. All pneumatic controllers located in the 8-Hour Ozone Control Area and placed in service on or after February 1, 2009, must emit natural gas emissions in an amount equal to or less than a low-bleed pneumatic controller, unless allowed pursuant to Section III.C.1.f.
- III.C.1.b. All high-bleed pneumatic controllers located in the 8-Hour Ozone Control Area and in service prior to February 1, 2009 shall be replaced or retrofit such that natural gas emissions are reduced to an amount equal to or less than a low-bleed pneumatic controller, by May 1, 2009, unless allowed pursuant to Section III.C.1.f.
- III.C.1.c. All pneumatic controllers located in northern Weld County and placed in service on or after February 14, 2023, and not already subject to Section III.C.3.a., must emit natural gas emissions in an amount equal to or less than a low-bleed pneumatic controller, unless allowed pursuant to Section III.C.1.f.

- III.C.1.d. All high-bleed pneumatic controllers located in northern Weld County in service prior to February 14, 2023, and not already subject to Section III.C.3.b. must be replaced or retrofit such that natural gas emissions are reduced to an amount equal to or less than a low-bleed pneumatic controller, by May 1, 2023, unless allowed pursuant to Section III.C.1.f.
- III.C.1.e. Except as provided in Section III.C.1.e.(iv), the following facilities must use only non-emitting controllers:
 - III.C.1.e.(i) Well production facilities that commence operations on or after February 14, 2023;
 - III.C.1.e.(ii) Well production facilities that receive production from a well that first begins production or is recompleted or refractured on or after February 14, 2023; and
 - III.C.1.e.(iii) Natural gas compressor stations that commence operations or increase compression horsepower on or after February 14, 2023.
 - III.C.1.e.(iv) Pneumatic controllers that emit natural gas to the atmosphere meeting any of the following conditions are not subject to the requirements in Section III.C.1.e.
 - III.C.1.e.(iv)(A) Pneumatic controllers necessary for a safety or process purpose that cannot otherwise be met without emitting natural gas. Owners or operators must submit justification to the Division for the emitting pneumatic controller(s) to be installed forty-five (45) days prior to installation.
 - III.C.1.e.(iv)(B) Pneumatic controllers that emit natural gas located on temporary or portable equipment that is used for well abandonment activities or used prior to or through the end of flowback.
 - III.C.1.e.(iv)(C) Pneumatic controllers on temporary or portable equipment that is in use and onsite for sixty (60) days or less. This does not apply to use on temporary or portable equipment used to temporarily increase throughput capacity of a facility. Owners or operators must submit justification to the Division for continued use beyond sixty (60) days at least fourteen (14) days before the 60-day period expires.
 - III.C.1.e.(iv)(D) Pneumatic controllers that emit natural gas to the atmosphere that are used as emergency shutdown devices or for artificial lift control located on a wellhead that is greater than one quarter mile from the associated well production facility or that is not located on the same surface disturbance as the associated production facility.
 - III.C.1.e.(iv)(E) Any pneumatic controller that emits natural gas pursuant to Sections III.C.1.e.(iv)(A) through (D) must be tagged, which will indicate that the controller may emit natural gas.

- III.C.1.f. All high-bleed pneumatic controllers that remain in service due to safety and/or process purposes must comply with Sections III.D. and III.E.
- III.C.1.f.(i) For high-bleed pneumatic controllers located in the 8-Hour Ozone Control Area and in service prior to February 1, 2009, the owner/operator must submit justification for high-bleed pneumatic controllers to remain in service due to safety and /or process purposes by March 1, 2009.
- III.C.1.f.(ii) For high-bleed pneumatic controllers located in the 8-Hour Ozone Control Area and placed in service on or after February 1, 2009, the owner/operator must submit justification for high-bleed pneumatic controllers to be installed due to safety and /or process purposes thirty (30) days prior to installation.
- III.C.1.f.(iii) For high-bleed pneumatic controllers located in northern Weld County in service prior to February 14, 2023, the owner/operator must submit justification for high-bleed pneumatic controllers to remain in service due to safety and /or process purposes by March 1, 2023.
- III.C.1.f.(iv) For high-bleed pneumatic controllers located in northern Weld County and placed in service on or after February 14, 2023, the owner/operator must submit justification for high-bleed pneumatic controllers to be installed due to safety and /or process purposes thirty (30) days prior to installation.
- III.C.2. Continuous bleed, natural gas-driven pneumatic controllers in the 8-Hour Ozone Control Area or northern Weld County and located at a natural gas processing plant:
 - III.C.2.a. All pneumatic controllers in the 8-Hour Ozone Control Area placed in service on or after January 1, 2018, must have a natural gas bleed rate of zero, unless allowed pursuant to Section III.C.2.e.
 - III.C.2.b. All pneumatic controllers in the 8-Hour Ozone Control Area with a bleed rate greater than zero in service prior to January 1, 2018, must be replaced or retrofit such that the pneumatic controller has a natural gas bleed rate of zero by May 1, 2018, unless allowed pursuant to Section III.C.2.e.
 - III.C.2.c. All pneumatic controllers located in northern Weld County and placed in service on or after February 14, 2023, must have a natural gas bleed rate of zero, unless allowed pursuant to Section III.C.2.e.
 - III.C.2.d. All pneumatic controllers located in northern Weld County with a bleed rate greater than zero in service prior to February 14, 2023, must be replaced or retrofit such that the pneumatic controller has a natural gas bleed rate of zero by January 1, 2024, unless allowed pursuant to Section III.C.2.e.
 - III.C.2.e. All pneumatic controllers with a natural gas bleed rate greater than zero that remain in service due to safety and/or process purposes must comply with Sections III.D. and III.E.

- III.C.2.e.(i) For pneumatic controllers in the 8-Hour Ozone Control Area with a natural gas bleed rate greater than zero in service prior to January 1, 2018, the owner or operator must submit justification for pneumatic controllers to remain in service due to safety and /or process purposes by May 1, 2018.
- III.C.2.e.(ii) For pneumatic controllers in the 8-Hour Ozone Control Area with a natural gas bleed rate greater than zero placed in service on or after January 1, 2018, the owner or operator must submit justification for pneumatic controllers to be installed due to safety and /or process purposes thirty (30) days prior to installation.
- III.C.2.e.(iii) For pneumatic controllers located in northern Weld County with a natural gas bleed rate greater than zero in service prior to February 14, 2023, the owner or operator must submit justification for pneumatic controllers to remain in service due to safety and /or process purposes by March 1, 2023.
- III.C.2.e.(iv) For pneumatic controllers located in northern Weld County with a natural gas bleed rate greater than zero placed in service on or after February 14, 2023, the owner or operator must submit justification for pneumatic controllers to be installed due to safety and /or process purposes thirty (30) days prior to installation.

III.C.3. (State Only) Statewide:

- III.C.3.a. Owners or operators of all pneumatic controllers placed in service on or after May 1, 2014, except as otherwise provided in Section III.C.4., must
 - III.C.3.a.(i) Utilize no-bleed pneumatic controllers where on-site electrical grid power is being used and use of a no-bleed pneumatic controller is technically and economically feasible.
 - III.C.3.a.(ii) If on-site electrical grid power is not being used or a no-bleed pneumatic controller is not technically and economically feasible, utilize pneumatic controllers that emit natural gas emissions in an amount equal to or less than a low-bleed pneumatic controller, unless allowed pursuant to Section III.C.3.c.
 - III.C.3.a.(iii) For purposes of Section III.C.3.a.(ii), instead of a low-bleed pneumatic controller, owners or operators may utilize a natural gas-driven intermittent pneumatic controller.
 - III.C.3.a.(iv) Utilizing self-contained pneumatic controllers satisfies Section III.C.3.a.(i).
- III.C.3.b. All high-bleed pneumatic controllers in service prior to May 1, 2014, must be replaced or retrofitted by May 1, 2015, such that natural gas emissions are reduced to an amount equal to or less than a low-bleed pneumatic controller, unless allowed pursuant to Section III.C.3.c.
- III.C.3.c. All high-bleed pneumatic controllers that must remain in service due to safety and/or process purposes must comply with Sections III.D. and III.E.

- III.C.3.c.(i) For high-bleed pneumatic controllers in service prior to May 1, 2014, the owner/operator must submit justification for high-bleed pneumatic controllers to remain in service due to safety and/or process purposes by March 1, 2015.
- III.C.3.c.(ii) For high-bleed pneumatic controllers placed in service on or after May 1, 2014, the owner/operator must submit justification for high-bleed pneumatic controllers to be installed due to safety and/or process purposes thirty (30) days prior to installation.
- III.C.3.d. Continuous bleed, natural gas-driven pneumatic controllers located at natural gas-processing plants that are not subject to the requirements of Section III.C.2.
 - III.C.3.d.(i) All pneumatic controllers placed in service on or after January 1, 2023, must have a natural gas bleed rate of zero, unless allowed pursuant to Section III.C.3.a.(iii).
 - III.C.3.d.(ii) All pneumatic controllers with a bleed rate greater than zero in service prior to January 1, 2023, must be replaced or retrofit such that the pneumatic controller has a natural gas bleed rate of zero by January 1, 2024, unless allowed pursuant to Section III.C.3.a.(iii).
 - III.C.3.d.(iii) All pneumatic controllers with a natural gas bleed rate greater than zero that remain in service due to safety and/or process purposes must comply with Sections III.D. and III.E.
 - III.C.3.d.(iii)(A) For pneumatic controllers with a natural gas bleed rate greater than zero in service prior to January 1, 2023, the owner or operator must submit justification for pneumatic controllers to remain in service due to safety and /or process purposes by March 1, 2023.
 - III.C.3.d.(iii)(B) For pneumatic controllers with a natural gas bleed rate greater than zero placed in service on or after January 1, 2023, the owner or operator must submit justification for pneumatic controllers to be installed due to safety and /or process purposes thirty (30) days prior to installation.
- III.C.4. (State Only) Non-Emitting Controller Requirements for Well Production Facilities and Natural Gas Compressor Stations
 - III.C.4.a. Except as provided in Section III.C.4.e.(i), the following facilities must use only non-emitting controllers:
 - III.C.4.a.(i) Well production facilities that commence operations on or after May 1, 2021;
 - III.C.4.a.(ii) Well production facilities that receive production from a well that first begins production or is recompleted or refractured on or after May 1, 2021; and
 - III.C.4.a.(iii) Natural gas compressor stations that commence operations or increase compression horsepower on or after May 1, 2021.

- III.C.4.b. Each well production facility and natural gas compressor station with non-emitting controllers used to satisfy the requirements of Sections III.C.4.a.(i) through III.C.4.a.(iii) must contain on-site signage indicating that the facility utilizes non-emitting controllers to satisfy the requirements of this Section III.C.4. This Section III.C.4.b does not apply to operator's subject to Section III.C.4.d.(vi). -
- III.C.4.c. Company-Wide Non-Emitting Controller Program for Well Production Facilities That Commenced Operation before May 1, 2021
- III.C.4.c.(i) Except as provided for in Section III.C.4.c.(iv), owners or operators of well production facilities that commenced operation before May 1, 2021, must phase out pneumatic controllers that emit natural gas to the atmosphere in accordance with Table 1.
- III.C.4.c.(ii) Except as provided for in Section III.C.4.c.(iv), owners or operators of well production facilities that commenced operations before May 1, 2021, must:
- III.C.4.c.(ii)(A) Determine Historic Facility Production for each existing well production facility that commenced operation before May 1, 2021.
- III.C.4.c.(ii)(A)(1) Historic Facility Production at each existing well production facility which first began production during 2018 or earlier must be based on total liquids production (summing total barrels of oil and water produced through the well production facility) for the calendar year 2019.
- III.C.4.c.(ii)(A)(2) Notwithstanding Section III.C.4.c.(ii)(A)(1), for any well production facility to which a well first began production during 2019, 2020 or by May 1, 2021, historic facility production must be based on the production for the first twelve (12) months beginning with the date of first production of the latest well to begin production prior to May 1, 2021.
- III.C.4.c.(ii)(A)(3) Notwithstanding Sections III.C.4.c.(ii)(A)(1) and (2), for any well production facility to which a well first began production during 2019, 2020, or by May 1, 2021, if twelve (12) months since date of first production of the latest well to begin production has not passed as of May 1, 2021, then the owner or operator must use an estimate of the anticipated yearly production for the facility based on industry accepted calculation methodologies.

- III.C.4.c.(ii)(B) Calculate the Total Historic Production for the owner or operator by summing the Historic Facility Production for all existing well production facilities that commenced operation before May 1, 2021.
- III.C.4.c.(ii)(C) Determine the percentage of total liquids production for each existing facility (the Facility Percent Production) by dividing the Historic Facility Production for that facility by the Total Historic Production.
- III.C.4.c.(ii)(D) Determine the Historic Non-Emitting Facility Percent Production.
 - III.C.4.c.(ii)(D)(1) If the well production facility, including all wellheads flowing to the well production facility, uses only non-emitting controllers, then the Facility Percent Production should be designated as Historic Non-Emitting Facility Percent Production.
 - III.C.4.c.(ii)(D)(2) In making the determination in Section III.C.4.c.(ii)(D)(1), pneumatic controllers that meet the conditions in Section III.C.4.e.(i) need not be considered.
- III.C.4.c.(ii)(E) Determine the Total Historic Non-Emitting Facility Percent Production percentage by summing the Historic Non-Emitting Facility Percent Production for all well production facilities that commenced operation prior to May 1, 2021. The Total Historic Non-Emitting Facility Percent Production determines an owner or operators' May 1, 2022 and May 1, 2023 Additional Required Non-Emitting Facility Percent Production, as set forth in Table 1.
- III.C.4.c.(iii) Owners or operators must demonstrate compliance with Table 1's May 1, 2022 and May 1, 2023 Additional Required Non-Emitting Facility Percent Production through any combination of (1) retrofitting well production facilities to utilize non-emitting controllers or (2) plugging and abandoning an existing well production facility.
- III.C.4.c.(iv) An owner or operator that demonstrates that its total statewide oil and natural gas production averages 15 barrels of oil equivalent or less per day per well is not subject to the requirements of Sections III.C.4.c.(i) through (iii). To calculate average statewide oil and natural gas production per day per well, an owner or operator must sum all oil and natural gas production for calendar year 2019 in barrels of oil equivalent, divide by three hundred and sixty-five, and divide by the number of wells the owner or operator operated statewide that produced hydrocarbons in 2019.

- III.C.4.c.(v) If a well production facility for which production was included in a calculation of achieving a Total Required Non-Emitting Facility Percent Production target is sold or transferred prior to May 1, 2023 and the selling or transferring owner or operator plans to utilize the well production facility to show compliance with Table 1, the selling or transferring owner or operator (and the buyer or transferee, as applicable) must submit to the Division an acknowledgment or certification within 30 days following sale or transfer, in a form acceptable to the Division, identifying how the selling or transferring owner or operator will utilize the well production facility to show compliance with Table 1.

In each submission of the updated Company-Wide Well Production Facility Natural Gas-Driven Pneumatic Controller Compliance Plan, the owner or operator will provide the date (month and year) when a well production facility was transferred since the last submission and whether or not the well production facility contributed or will contribute towards achieving the Total Required Non-Emitting Facility Percent Production. An owner or operator that merges with or acquires an owner or operator with a Company-Wide Well Production Facility Natural Gas-Driven Pneumatic Controller Compliance Plan must comply, despite the resulting ownership or operatorship, with each Company-Wide Well Production Facility Natural Gas-Driven Pneumatic Controller Compliance Plan, as applicable, and as established on September 1, 2021.

- III.C.4.c.(vi) For each facility designated as contributing to Historic Non-Emitting Facility Percent Production, the owner or operator will place signage on-site by October 1, 2021 indicating that the facility utilizes non-emitting controllers to satisfy the requirements of this Section III.C.4.c.

TABLE 1*—Well Production Facilities					
Total Historic Non-Emitting Facility Percent Production	May 1, 2022 Additional Required Non-Emitting Facility Percent Production	May 1, 2022 Maximum Required Non-Emitting Facility Percent Production	May 1, 2023 Additional Required Non-Emitting Facility Percent Production	May 1, 2023 Maximum Required Non-Emitting Facility Percent Production	Total Additional Required Non-Emitting Facility Percent Production By May 1 2023
> 75 %	+5%	90%	+10%	96.5%	+15%
> 60-75 %	+5%	80%	+10%	90%	+15%
> 40-60 %	+10%	65%	+15%	75%	+25%
> 20-40 %	+15%	50%	+20%	65%	+35%
0-20 %	+15%	35%	+25%	55%	+40%

* Table 1 establishes minimum increases in the percentage of liquids produced (based on historic non-emitting controller use) from non-emitting facilities. Owners or operators do not need to go beyond the maximum required percentages set forth in Table 1, although they may choose to do so.

- III.C.4.d. Company-Wide Non-Emitting Controller Compliance Program for Natural Gas Compressor Stations that Commenced Operation Before May 1, 2021.
 - III.C.4.d.(i) Owners or operators of natural gas compressor stations that commenced operation before May 1, 2021, must phase out pneumatic controllers that emit natural gas to the atmosphere in accordance with Table 2.
 - III.C.4.d.(ii) Owners or operators of natural gas compressor stations that commenced operation before May 1, 2021, must:
 - III.C.4.d.(ii)(A) Determine Total Controller Count for all controllers at all of the owner or operator's natural gas compressor stations that commenced operation before May 1, 2021. The Total Controller Count must include all pneumatic controllers and all non-emitting controllers, except that pneumatic controllers excluded under Sections III.C.4.e.(i)(A) through (C) are not included in the Total Controller Count.
 - III.C.4.d.(ii)(B) Determine which controllers in the Total Controller Count are non-emitting and sum the total number of non-emitting controllers and designate those as Total Historic Non-Emitting Controllers.
 - III.C.4.d.(ii)(C) Determine the Total Historic Non-Emitting Percent Controllers by dividing the Total Historic Non-Emitting Controller Count by the Total Controller Count.
 - III.C.4.d.(iii) Owners or operators must demonstrate compliance with Table 2's May 1, 2022 and May 1, 2023 Additional Required Percentage of Non-Emitting Controllers through any combination of (1) retrofitting controllers at natural gas compressor stations to utilize non-emitting controllers or (2) permanently removing natural gas compressor stations from service.
 - III.C.4.d.(iv) Pneumatic controllers that emit natural gas to atmosphere at natural gas compressor stations with non-emitting controllers must be tagged, which will indicate that the controller may emit natural gas. The tags must differentiate between pneumatic controllers that are exempt under Sections III.C.4.e.(i)(A) through (C) and pneumatic controllers that emit natural gas to the atmosphere under the company-wide plan. Tagging pursuant to this Section III.C.4.d.(iv) must occur by May 1, 2022.
 - III.C.4.d.(v) If a natural gas compressor station for which the number of pneumatic controllers located at such compressor station was included in a calculation of achieving a Total Required Non-Emitting Percent Controllers target is sold or transferred prior to May 1, 2023 and the selling or transferring owner or operator plans to utilize the pneumatic controllers at that natural gas compressor station to show compliance with Table 2, the selling or transferring owner or operator (and the buyer or transferee, as applicable) must submit to the Division an acknowledgement or certification, within 30 days following sale or transfer, in a form

acceptable to the Division, identifying how the selling or transferring owner or operator will utilize the pneumatic controllers at that natural gas compressor station to show compliance with Table 2.

In each submission of the updated Company-Wide Compressor Station Pneumatic Controller Compliance Plan, the owner or operator will provide the date (month and year) when the natural gas compressor station was transferred since the last submission and whether or not the compressor station contributed or will contribute towards achieving the Total Required Non-Emitting Percent Controllers. An owner or operator that merges with or acquires an owner or operator with a Company-Wide Compressor Station Pneumatic Controller Compliance Plan must comply, despite the resulting ownership or operatorship, with each Company-Wide Compressor Station Pneumatic Controller Compliance Plan, as applicable, and as established on September 1, 2021.

III.C.4.d.(vi) This section applies to owners or operators of natural gas compressor stations where all the owner or operator's active, operating natural gas compressor stations use only non-emitting controllers (except that pneumatic controllers that qualify for the exclusions set forth in Sections III.C.4.e.(i)(A) through (C) are not required to be non-emitting controllers).

III.C.4.d.(vi)(A) No later than September 1, 2021, such owners or operators may file a one-time notification with the Division in lieu of the requirements in Sections III.C.4.d.(i) through (iii) that:

III.C.4.d.(vi)(A)(1) Lists each active, operating natural gas compressor station (including AIRS identification numbers and facility names) and that includes a certification by the company representative that supervised the development and submission of the notification that, based on information and belief formed after reasonable inquiry, each of its active, operating natural gas compressor stations uses only non-emitting controllers (except that pneumatic controllers that qualify for the exclusions set forth in Sections III.C.4.e.(i)(A) through (C) are not required to be non-emitting controllers); and

III.C.4.d.(vi)(A)(2)

Lists each inactive, non-operating compressor station (including AIRS identification numbers and facility names) and that includes a certification by the company representative that supervised the development and submission of the notification that after May 1, 2021, such compressor stations have not and subsequently will not operate with pneumatic controllers that emit natural gas to the atmosphere, except pneumatic controllers that qualify for exclusions set forth in subject to Sections III.C.4.e.(i)(A) through (C).

III.C.4.d.(vi)(B) If applicable, the notifications submitted under this section must list any pneumatic controllers that qualify for exclusions pursuant to Sections III.C.4.e.(i)(A) through (C) and identify the specific exemption applicable to each such pneumatic controller. Operators must tag any controller qualifying for the exclusions in Sections III.C.4.e.(i)(A) through (C) by October 1, 2021.

III.C.4.d.(vi)(C) The owner or operator must maintain a copy of the one-time notification required by Section III.C.4.d.(vi)(A) for five years.

TABLE 2* – Natural Gas Compressor Stations					
Total Historic Percentage of Non-Emitting Controllers	May 1, 2022 Additional Required Percentage of Non-Emitting Controllers	May 1, 2022 Maximum Required Percentage of Non-Emitting Controllers	May 1, 2023 Additional Required Percentage of Non-Emitting Controllers	May 1, 2023 Maximum Required Percentage of Non-Emitting Controllers	Total Additional Required Percentage of Non-Emitting Controllers By May 1, 2023
> 75 %	+10%	90%	+15%	100%	+25%
>60-75 %	+10%	85%	+20%	92%	+30%
>40-60 %	+10%	70%	+25%	75%	+35%
>20-40 %	+15%	50%	+25%	65%	+40%
0-20 %	+20%	35%	+25%	60%	+45%

* Table 2 establishes minimum additional percentages of non-emitting controllers required by May 1, 2022 and May 1, 2023 based on a company's historic percentage of non-emitting controllers. Owners and operators need not go beyond the maximum required percentages specified in Table 2, although they may choose to do so.

III.C.4.e. Pneumatic Controllers That Emit Natural Gas to the Atmosphere Not Subject to Non-Emitting Controller Requirements for Well Production Facilities and Natural Gas Compressor Stations.

- III.C.4.e.(i) Pneumatic controllers that emit natural gas to the atmosphere meeting any of the following conditions are not subject to the requirements in Section III.C.4.a. and are not required to be retrofit in order to count the facility or controller as non-emitting for compliance with the company-wide plans under Sections III.C.4.c. and III.C.4.d.
- III.C.4.e.(i)(A) Pneumatic controllers necessary for a safety or process purpose that cannot otherwise be met without emitting natural gas.
- III.C.4.e.(i)(A)(1) Owners or operators that seek to rely on this exemption for facilities listed in Sections III.C.4.a.(i) through (iii) must submit a justification for the safety or process purposes to the Division for approval forty-five (45) days prior to installation of emitting device or retrofit of the facility. If the Division does not respond to the justification within forty-five (45) days after submission of the justification, the justification will be deemed approved.
- III.C.4.e.(i)(A)(2) Owners or operators that seek to rely on this exemption to maintain emitting controllers at facilities that are retrofit to meet requirements of Section III.C.4.c.(i) must submit a justification for the safety or process purposes to the Division for approval forty-five (45) days prior to retrofit of the facility. If the Division does not respond to the justification within forty-five (45) days after submission of the justification, the justification will be deemed approved.
- III.C.4.e.(i)(B) Pneumatic controllers that emit natural gas located on temporary or portable equipment that is used for well abandonment activities or used prior to or through the end of flowback.
- III.C.4.e.(i)(C) Pneumatic controllers that emit natural gas located on temporary or portable equipment meeting the requirements of this Section III.C.4.e.(i)(C).

- III.C.4.e.(i)(C)(1) Upon notice to the Division on a form developed by the Division, pneumatic controllers that emit natural gas other than those covered by Section III.C.4.e.(i)(B) located on temporary or portable equipment that is in use and onsite for sixty (60) days or less. However, this exemption for temporary or portable equipment does not apply to pneumatic controllers that emit natural gas used on temporary or portable equipment to temporarily increase throughput capacity of a facility.
- III.C.4.e.(i)(C)(2) An owner or operator must obtain written approval from the Division for continued use beyond 60 days of pneumatic controllers that emit natural gas under Section III.C.4.e.(i)(C). The owner or operator must submit the request for an extension to the Division at least fourteen (14) days before the 60-day period expires. If the Division does not respond to the request before the 60-day period expires, the request will be deemed approved until such time as the Division may determine that the extension should be denied.
- III.C.4.e.(i)(C)(2)(a) To request such an exemption, the owner or operator must submit a plan for Division approval which (1) identifies the temporary or portable equipment and number and type of pneumatic controllers that emit natural gas, (2) identifies how long the owner or operator plans to keep the equipment on site, (3) explains the need for an extension, and (4) other information as reasonably required by the Division.
- III.C.4.e.(i)(C)(2)(b) In explaining the need for an extension, the operator must clearly identify the basis for extension; the anticipated schedule for use of the temporary or portable equipment; and the steps taken to minimize the length of the requested extension.

- III.C.4.e.(i)(C)(3) The operator must inspect the pneumatic controllers using approved instrument monitoring method and AVO, consistent with Section II.E, at the same frequency as the associated well production facility or compressor station, and must comply with the repair, recordkeeping, and reporting provisions in Sections II.E.6 through 9.
- III.C.4.e.(i)(D) Pneumatic controllers that emit natural gas to the atmosphere that are used as emergency shutdown devices or for artificial lift control located on a wellhead: (1) greater than one quarter mile from the associated production facilities for well production facilities that commenced operation on or after May 1, 2021; or (2) not located on the same surface disturbance as the associated production facilities for well production facilities that commenced operation before May 1, 2021.
- III.C.4.e.(i)(D)(1) Owners or operators who seek to use a pneumatic controller at a qualifying wellhead at a facility listed in Sections III.C.4.a.(i) or (ii) that is not used as an emergency shutdown device or for artificial lift control must submit a justification for the use of such a pneumatic controller to the Division for approval forty-five (45) days prior to installation of the emitting device or retrofit of the facility. If the Division does not respond to the justification within forty-five (45) days after submission of the justification, the justification will be deemed approved.
- III.C.4.e.(i)(D)(2) Owners or operators that seek to rely on this exemption to exclude emitting pneumatic controllers at a qualifying wellhead that are not used as an emergency shutdown device or for artificial lift control when determining their Total Historic Non-Emitting Facility Percent Production pursuant to Section III.C.4.c.(ii) must submit a justification to the Division for approval no later than July 1, 2021. If the Division does not respond to the justification by August 15, 2021, the justification will be deemed approved.

- III.C.4.e.(i)(D)(3) Operators that utilize the exemption in Section III.C.4.e.(i)(D) must identify leaks from components using an approved instrument monitoring method and AVO, consistent with Section II.E, at the same frequency as the well production facility to which the well flows as set forth in Table 3 of Section II.E.4, or on a frequency no less than one time per year, whichever is greater, and must comply with the repair, recordkeeping, and reporting provisions in Sections II.E.6 through 9. For well production facilities that commenced operation before May 1, 2021 with wellheads utilizing this exemption, the requirement in this Section III.C.4.e.(i)(D)(3) must begin May 1, 2022.
- III.C.4.e.(i)(D)(3)(a) An owner or operator that cannot reasonably access the wellhead site to conduct a monthly AIMM or AVO inspection due to circumstances beyond its control (including but not limited to the presence of crops, wildlife restrictions, or severe weather conditions) shall conduct an AVO or AIMM inspection, as applicable, within 14 days of the condition preventing inspection being resolved. Owners or operators that rely on this Section III.C.4.e.(i)(D)(3)(a) must maintain records pursuant to Section III.C.4.g.(vii) and report pursuant Section III.C.4.g.(viii).
- III.C.4.e.(i)(D)(3)(b) Operators may use drone-mounted infra-red cameras that ensure line of sight and appropriate distance from the drone to all wellhead equipment and components to conduct the inspections required under Section III.C.4.e.(i)(D)(3). Operators must develop their own methodology before using OGI camera-equipped aerial drones and make that methodology available to the Division upon request.

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- III.C.4.e.(i)(D)(4) If a wellhead has on-site electrical grid power to operate an electric controller, then operators may not utilize the exemption in Section III.C.4.e.(i)(D) for any pneumatic controller at the wellhead for which it is technically feasible to utilize an electric controller.
- III.C.4.e.(i)(D)(5) Operators may not utilize the exemption in Section III.C.4.e.(i)(D) where equipment with pneumatic controllers other than the wellhead is located at the wellhead site.
- III.C.4.e.(ii) By October 1, 2021, each pneumatic controller at a well production facility that emits natural gas pursuant to Sections III.C.4.e.(i)(A) through (D) must be tagged, which will indicate that the controller may emit natural gas.
- III.C.4.e.(iii) By October 1, 2021, each pneumatic controller at a natural gas compressor station that emits natural gas pursuant to Sections III.C.4.e.(i)(A) through (C) must be tagged, which will indicate that the controller may emit natural gas.
- III.C.4.f. Company-Wide Well Production Facility and Natural Gas Compressor Station Reporting Requirements.
- III.C.4.f.(i) Owners and operators of well production facilities subject to Sections III.C.4.c.(i) through (iii) must submit a Company-Wide Well Production Facility Pneumatic Controller Compliance Plan to the Division on the Division-approved form by September 1, 2021, and include all of the following elements:
- III.C.4.f.(i)(A) A list of existing well production facilities as of May 1, 2021, including AIRS identification numbers and facility names.
- III.C.4.f.(i)(B) The following for each well production facility:
- III.C.4.f.(i)(B)(1) Historic Facility Production.
- III.C.4.f.(i)(B)(2) Facility Percent Production.
- III.C.4.f.(i)(B)(3) Historic Non-Emitting Facility Percent Production.
- III.C.4.f.(i)(B)(4) The API number for each producing well included in the Total Historic Facility Production.
- III.C.4.f.(i)(C) The following company-wide information:
- III.C.4.f.(i)(C)(1) Total Historic Production.

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- III.C.4.f.(i)(C)(2) Total Historic Non-Emitting Facility Percent Production, including a list of facilities already using non-emitting controllers as determined in Section III.C.4.c.(ii)(E).
- III.C.4.f.(i)(C)(3) Total Required Non-Emitting Facility Percent Production.
- III.C.4.f.(i)(D) An indication of which and in what year well production facilities are expected to be retrofit with non-emitting controllers, or plugged and abandoned, to meet the required Additional Non-Emitting Facility Percent Production for each year listed in Table 1.
- III.C.4.f.(ii) Owners or operators will submit an updated Company-Wide Facility Pneumatic Controller Compliance Plan by July 1 of each year listed in Table 1, unless the owner or operator has demonstrated compliance with the Total Required Non-Emitting Facility Percent Production in a previous year's plan. The updated plan will include all of the following elements:
- III.C.4.f.(ii)(A) All elements set forth in Sections III.C.4.f.(i)(A) through (C).
- III.C.4.f.(ii)(B) The date (month and year) that any well production facilities were retrofit or plugged and abandoned since the prior submission, which may vary from the information previously provided pursuant to Section III.C.4.f.(i)(D).
- III.C.4.f.(ii)(C) An update of information set forth in Section III.C.4.f.(i)(D) if the Total Required Non-Emitting Facility Percent Production required by Table 1 has not been met.
- III.C.4.f.(ii)(D) For each submission, the owner or operator must list each existing well production facility that is utilizing non-emitting controllers and provide a demonstration that the required Additional Non-Emitting Facility Percent Production for the relevant year has been met.
- III.C.4.f.(ii)(E) In the final year, the owner or operator must additionally provide a demonstration that the Total Required Non-Emitting Facility Percent Production has been met.
- III.C.4.f.(iii) Owners and operators of natural gas compressor stations subject to Sections III.C.4.d.(i) through (iii) must submit a Company-Wide Compressor Station Pneumatic Controller Compliance Plan to the Division on a Division-approved form by September 1, 2021, and include all of the following elements:
- III.C.4.f.(iii)(A) A listing of existing natural gas compressor stations as of May 1, 2021, including AIRS identification numbers and facility names.

III.C.4.f.(iii)(B) The following company-wide information:

III.C.4.f.(iii)(B)(1) Total Controller Count, including a list of each pneumatic controller and all non-emitting controllers, except that pneumatic controllers excluded under Sections III.C.4.e.(i)(A) through (C) are not included in the Total Controller Count.

III.C.4.f.(iii)(B)(2) Total Historic Non-Emitting Controllers, including an indication as to which controllers are already non-emitting.

III.C.4.f.(iii)(B)(3) Total Required Non-Emitting Facility Percent Controllers.

III.C.4.f.(iii)(C) An indication of which and in what year controllers are expected to be retrofit with non-emitting controllers or removed from service (as applicable) to meet the required Additional Non-Emitting Percent Controllers for each year listed in Table 2.

III.C.4.f.(iv) Owners or operators will submit an updated Company-Wide Compressor Station Pneumatic Controller Compliance Plan by July 1 of each year listed in Table 2, unless the owner or operator has demonstrated compliance with the Total Required Non-Emitting Percent Controllers in a previous year's plan. The updated plan will include all of the following elements:

III.C.4.f.(iv)(A) All elements set forth in Sections III.C.4.f.(iii)(A) through (B).

III.C.4.f.(iv)(B) The date (month and year) that any controllers at natural gas compressor stations were retrofit or removed from service since the prior submission, which may vary from the information previously provided pursuant to Section III.C.4.f.(iii)(C).

III.C.4.f.(iv)(C) The information set forth in Section III.C.4.f.(iii)(C) if the Total Required Non-Emitting Percent Controllers required by Table 2 has not been met.

III.C.4.f.(iv)(D) For each submission, the owner or operator must list total controllers and total non-emitting controllers at existing natural gas compressor stations and provide a demonstration that the required Additional Non-Emitting Percent Controllers for the relevant year has been met.

III.C.4.f.(iv)(E) In the final year, the owner or operator must additionally provide a demonstration that the Total Required Non-Emitting Percent Controller has been met.

- III.C.4.g. Recordkeeping and Reporting Requirements. The records in Sections III.C.4.g.(i) through (vii) must be kept for a period of five years and made available to the Division upon request.
- III.C.4.g.(i) Records of the date a well production facility completes retrofit or all wells flowing to the well production facility are plugged and abandoned, or the date natural gas compressor station pneumatic controllers were retrofit or is taken out of service.
- III.C.4.g.(ii) If claiming an exemption under Sections III.C.4.e.(i)(A) through III.C.4.e.(i)(D), records for each pneumatic controller demonstrating that the exemption applies.
- III.C.4.g.(iii) Copies of the Company-Wide Well Production Facility Pneumatic Controller Compliance Plan and Company-Wide Compressor Station Pneumatic Controller Compliance Plans required to be submitted by Sections III.C.4.f.(i) through III.C.4.f.(iv).
- III.C.4.g.(iv) For any owner or operator utilizing the provision in Section III.C.4.c.(iv), the records described in Section III.C.4.c.(iv) that demonstrate the owner or operator qualifies for that provision.
- III.C.4.g.(v) For each pneumatic controller required to be tagged pursuant to Sections III.C.4.d.(iv), III.C.4.d.(vi)(B), III.C.4.e.(ii), or III.C.4.e.(iii), a list of each tagged pneumatic controller, equipment location, and its tag identification number.
- III.C.4.g.(vi) Records required to be submitted to the Division pursuant to Sections III.C.4.c.(v) and III.C.4.d.(v).
- III.C.4.g.(vii) Owners or operators that rely on Section III.C.4.e.(i)(D)(3)(a) must maintain: (1) the date of the AIMM or AVO inspection at the production facility to which the well flows, (2) the date of the AIMM or AVO inspection of the wellhead site once the conditions preventing inspection has been resolved, and (3) records demonstrating the circumstances that prevented the wellhead site from being inspected.
- III.C.4.g.(viii) Owners or operators that rely on Section III.C.4.e.(i)(D)(3)(a) shall report annually by May 31 of each year, on a form approved by the Division, the number of wellhead sites for which the AIMM inspection was delayed pursuant to Section III.C.4.e.(i)(D)(3)(a), the number of wellhead sites for which the AVO inspection was delayed pursuant to Section III.C.4.e.(i)(D)(3)(a), and the total number of wellhead sites where inspections were delayed pursuant to Section III.C.4.e.(i)(D)(3)(a) for (1) 30 days or less, (2) greater than 30 days but less than or equal to 90 days, and (3) greater than 90 days.

III.D. Monitoring

This section applies to pneumatic controllers identified in Sections III.C.1.f. and III.C.2.e. (State Only: and in Sections III.C.3.c. and III.C.3.d.(iii)).

- III.D.1. In the 8-Hour Ozone Control Area or northern Weld County and located from the wellhead to the natural gas processing plant or point of custody transfer to an oil pipeline:

- III.D.1.a. Effective May 1, 2009, or February 14, 2023, if located in northern Weld County, each high-bleed pneumatic controller must be physically tagged by the owner or operator identifying it with a unique high-bleed pneumatic controller number that is assigned and maintained by the owner or operator.
- III.D.1.b. Effective May 1, 2009, or February 14, 2023, if located in northern Weld County, the owner or operator must inspect each high-bleed pneumatic controller on a monthly basis, perform necessary maintenance (such as cleaning, tuning, and repairing leaking gaskets, tubing fittings, and seals; tuning to operate over a broader range of proportional band, eliminating unnecessary valve positioners), and maintain the pneumatic controller according to manufacturer specifications to ensure that the controller's natural gas emissions are minimized.
- III.D.2. In the 8-Hour Ozone Control Area or northern Weld County and located at a natural gas processing plant:
 - III.D.2.a. Effective May 1, 2018, or March 1, 2023, if located in northern Weld County, each pneumatic controller with a natural gas bleed rate greater than zero must be physically tagged by the owner or operator identifying it with a unique pneumatic controller number that is assigned and maintained by the owner or operator.
 - III.D.2.b. Effective May 1, 2018, or March 1, 2023, if located in northern Weld County, the owner or operator must inspect each pneumatic controller with a natural gas bleed rate greater than zero on a monthly basis, perform necessary maintenance (such as cleaning, tuning, and repairing leaking gaskets, tubing fittings, and seals; tuning to operate over a broader range of proportional band; eliminating unnecessary valve positioners), and maintain the pneumatic controller according to manufacturer specifications to ensure that the controller's natural gas emissions are minimized.
- III.D.3. (State Only) Statewide:
 - III.D.3.a. Effective May 1, 2015, each high-bleed pneumatic controller must be physically tagged by the owner or operator identifying it with a unique high-bleed pneumatic controller number that is assigned and maintained by the owner or operator.
 - III.D.3.b. Effective May 1, 2015, the owner or operator must inspect each high-bleed pneumatic controller on a monthly basis, perform necessary maintenance (such as cleaning, tuning, and repairing leaking gaskets, tubing fittings, and seals; tuning to operate over a broader range of proportional band; eliminating unnecessary valve positioners), and maintain the pneumatic controller according to manufacturer specifications to ensure that the controller's natural gas emissions are minimized.
- III.D.4. (State Only) Located at a natural gas processing plant not subject to Section III.D.2.

- III.D.4.a. Effective March 1, 2023, each pneumatic controller with a natural gas bleed rate greater than zero must be physically tagged by the owner or operator identifying it with a unique pneumatic controller number that is assigned and maintained by the owner or operator.
- III.D.4.b. Effective March 1, 2023, the owner or operator must inspect each pneumatic controller with a natural gas bleed rate greater than zero on a monthly basis, perform necessary maintenance (such as cleaning, tuning, and repairing leaking gaskets, tubing fittings, and seals; tuning to operate over a broader range of proportional band; eliminating unnecessary valve positioners), and maintain the pneumatic controller according to manufacturer specifications to ensure that the controller's natural gas emissions are minimized.

III.E. Recordkeeping

III.E.1. In the 8-Hour Ozone Control Area or northern Weld County:

- III.E.1.a. Continuous bleed, natural gas-driven pneumatic controllers located from the wellhead to the natural gas processing plant or point of custody transfer to an oil pipeline:
 - III.E.1.a.(i) By January 1, 2019, or January 1, 2024, if located in northern Weld County, owners or operators must compile an estimate of the total number of continuous bleed, natural gas-driven pneumatic controllers in service prior to January 1, 2018, or January 1, 2024, if located in northern Weld County, and documentation (e.g., manufacturer specification, engineering calculations) that the natural gas bleed rate is less than or equal to 6 standard cubic feet of gas per hour.
 - III.E.1.a.(ii) Beginning January 1, 2018, or January 1, 2024, if located in northern Weld County, the owner or operator must maintain records of the make and model of each type of continuous bleed, natural gas-driven pneumatic controllers placed in service on or after January 1, 2018, or January 1, 2024, if located in northern Weld County, and documentation (e.g., manufacturer specification, engineering calculations) that the natural gas bleed rate is less than or equal to 6 standard cubic feet of gas per hour. Owners or operators must use this information to update the estimate required in Section III.E.1.a.(i) every three years (i.e., by January 1, 2022, January 1, 2025, etc.) (i.e., for northern Weld County, January 1, 2027, January 1, 2030, etc.).
- III.E.1.b. Continuous bleed, natural gas-driven pneumatic controllers located at a natural gas processing plant:
 - III.E.1.b.(i) By January 1, 2019, or January 1, 2024, if located in northern Weld County, owners or operators must compile an estimate of the total number of continuous bleed, natural gas-driven pneumatic controllers in service prior to January 1, 2018, or January 1, 2024, if located in northern Weld County, and documentation (e.g., manufacturer specification, engineering calculations) that the natural gas bleed rate is zero.

- III.E.1.b.(ii) Beginning January 1, 2018, or January 1, 2024, if located in northern Weld County, the owner or operator must maintain records of the make and model of each type of continuous bleed, natural gas-driven pneumatic controllers placed in service on or after January 1, 2018, or January 1, 2024, if located in northern Weld County, and documentation (e.g., manufacturer specification, engineering calculations) that the natural gas bleed rate is zero. Owners or operators must use this information to update the estimate required in Section III.E.1.b.(i) every three years (i.e., by January 1, 2022, January 1, 2025, etc.) (i.e., for northern Weld County, January 1, 2027, January 1, 2030, etc.).
 - III.E.1.c. Records must be maintained for a minimum of five years and made available to the Division upon request.
- III.E.2. This section applies only to pneumatic controllers identified in Sections III.C.1.f. and III.C.2.e. (State Only: and in Section III.C.3.c.).
 - III.E.2.a. The owner or operator must maintain a log of the total number of pneumatic controllers and their associated controller numbers per facility, the total number of pneumatic controllers per company and the associated justification that the pneumatic controllers must be used pursuant to Sections III.C.1.f. and III.C.2.e. (State Only: and in Section III.C.3.c.). The log shall be updated on a monthly basis.
 - III.E.2.b. The owner or operator must maintain a log of necessary maintenance which shall include, at a minimum, inspection dates, the date of the maintenance activity, pneumatic controller number, description of the maintenance performed, results and date of any corrective action taken, and the printed name and signature of the individual performing the maintenance. The log shall be updated on a monthly basis.
 - III.E.2.c. Records of maintenance of pneumatic controllers shall be maintained for a minimum of three years and readily made available to the Division upon request.
- III.F. (State Only) Pneumatic Controller Inspection and Enhanced Response
 - III.F.1. General Requirements
 - III.F.1.a. Beginning January 1, 2018, owners or operators of natural gas-driven pneumatic controllers in the 8-Hour Ozone Control Area must operate and maintain pneumatic controllers consistent with manufacturer's specifications, if available, or good engineering and maintenance practices.
 - III.F.1.b. Beginning May 1, 2020, owners or operators of natural gas-driven pneumatic controllers state-wide must operate and maintain pneumatic controllers consistent with manufacturer's specifications, if available, or good engineering and maintenance practices.
 - III.F.2. Pneumatic controller inspection

- III.F.2.a. Beginning June 30, 2018, through calendar year 2019, owners or operators of natural gas-driven pneumatic controllers at well production facilities in the 8-Hour Ozone Control Area must inspect pneumatic controllers using an approved instrument monitoring method at least
- III.F.2.a.(i) Annually at well production facilities with uncontrolled actual volatile organic compound emissions greater than or equal to one (1) ton per year and less than or equal to six (6) tons per year, based on a rolling twelve-month total.
 - III.F.2.a.(ii) Semi-annually at well production facilities with uncontrolled actual volatile organic compound emissions greater than six (6) tons per year and less than or equal to twelve (12) tons per year, based on a rolling twelve-month total.
 - III.F.2.a.(iii) Quarterly at well production facilities with uncontrolled actual volatile organic compound emissions greater than twelve (12) tons per year and less than or equal to twenty (20) tons per year, based on a rolling twelve-month total, or fifty (50) tons per year if no storage tanks storing oil or condensate are located at the well production facility, based on a rolling twelve-month total.
 - III.F.2.a.(iv) Monthly at well production facilities with uncontrolled actual volatile organic compound emissions greater than twenty (20) tons per year, based on a rolling twelve-month total, or fifty (50) tons per year if no storage tanks storing oil or condensate are located at the well production facility, based on a rolling twelve-month total.
- III.F.2.b. Beginning calendar year 2020, owners or operators of natural gas-driven pneumatic controllers at well production facilities must inspect pneumatic controllers using an approved instrument monitoring method at least:
- III.F.2.b.(i) Annually at well production facilities in the 8-Hour Ozone Control Area with uncontrolled actual volatile organic compound emissions greater than or equal to one (1) ton per year and less than two (2) tons per year, based on a rolling twelve-month total.
 - III.F.2.b.(ii) Semi-annually at well production facilities statewide with uncontrolled actual volatile organic compound emissions greater than or equal to two (2) tons per year and less than or equal to twelve (12) tons per year, based on a rolling twelve-month total.
 - III.F.2.b.(iii) Quarterly at well production facilities statewide with uncontrolled actual volatile organic compound emissions greater than twelve (12) tons per year and less than or equal to twenty (20) tons per year, based on a rolling twelve-month total, or fifty (50) tons per year if no storage tanks storing oil or condensate are located at the well production facility, based on a rolling twelve-month total.

- III.F.2.b.(iv) Monthly at well production facilities statewide with uncontrolled actual volatile organic compound emissions greater than twenty (20) tons per year, based on a rolling twelve-month total, or fifty (50) tons per year if no storage tanks storing oil or condensate are located at the well production facility, based on a rolling twelve-month total.
- III.F.2.c. Beginning calendar year 2023, owners or operators of natural gas-driven pneumatic controllers at well production facilities must inspect pneumatic controllers using an approved instrument monitoring method at the same frequency that the owner or operator inspects components for leaks pursuant to Sections II.E.4.e. or II.E.4.f.
- III.F.2.d. For purposes of Sections III.F.2.a. through III.F.2.c., the estimated uncontrolled actual VOC emissions from the highest emitting storage tank at the well production facility determines the frequency at which inspections must be performed. If no storage tanks storing oil or condensate are located at the well production facility, owners or operators must rely on the facility emissions (controlled actual VOC emissions from all permanent equipment, including emissions from components determined by utilizing the emission factors defined as less than 10,000 ppmv of Table 2-8 of the 1995 EPA Protocol for Equipment Leak Emission Estimates).
- III.F.2.e. Beginning June 30, 2018, owners or operators of natural gas-driven pneumatic controllers at natural gas compressor stations in the 8-Hour Ozone Control Area must inspect pneumatic controllers using an approved instrument monitoring method at least:
 - III.F.2.e.(i) Quarterly at natural gas compressor stations with fugitive volatile organic compound emissions greater than zero (0) and less than or equal to fifty (50) tons per year, based on a rolling twelve-month total.
 - III.F.2.e.(ii) Monthly at natural gas compressor stations with fugitive volatile organic compounds greater than fifty (50) tons per year, based on a rolling twelve-month total.
- III.F.2.f. Beginning calendar year 2020, owners or operators of natural gas-driven pneumatic controllers at natural gas compressor stations outside the 8-Hour Ozone Control Area must inspect pneumatic controllers using an approved instrument monitoring method at least
 - III.F.2.f.(i) Semi-annually at natural gas compressor stations with fugitive volatile organic compound emissions greater than zero (0) and less than or equal to twelve (12) tons per year, based on a rolling twelve-month total.
 - III.F.2.f.(ii) Quarterly at natural gas compressor stations with fugitive volatile organic compound emissions greater than twelve (12) and less than or equal to fifty (50) tons per year, based on a rolling twelve-month total.

- III.F.2.f.(iii) Monthly at natural gas compressor stations with fugitive volatile organic compounds greater than fifty (50) tons per year, based on a rolling twelve-month total.
 - III.F.2.g. Beginning calendar year 2023, owners or operators of natural gas-driven pneumatic controllers at natural gas compressor stations must inspect pneumatic controllers using an approved instrument monitoring method at least
 - III.F.2.g.(i) Quarterly at natural gas compressor stations with fugitive volatile organic compound emissions greater than zero (0) and less than or equal to fifty (50) tons per year, based on a rolling twelve-month total.
 - III.F.2.g.(ii) Bimonthly at natural gas compressor stations with fugitive volatile organic compound emissions greater than zero (0) and less than or equal to fifty (50) tons per year, based on a rolling twelve-month total, and located within a disproportionately impacted community or within 1,000 feet of an occupied area.
 - III.F.2.g.(iii) Monthly at natural gas compressor stations with fugitive volatile organic compounds greater than fifty (50) tons per year, based on a rolling twelve-month total.
 - III.F.2.h. For purposes of Sections III.F.2.d. and III.F.2.e., fugitive emissions must be calculated using the emission factors of Table 2-4 of the 1995 EPA Protocol for Equipment Leak Emission Estimates (Document EPA-453/R-95-017), or other Division approved method.
 - III.F.2.i. Beginning January 1, 2023, owners or operators of natural gas-driven pneumatic controllers located at natural gas-processing plants must inspect pneumatic controllers at least quarterly using an approved instrument monitoring method.
 - III.F.2.j. Where detectable emissions from the pneumatic controller are observed, owners or operators must determine whether the pneumatic controller is operating properly within five (5) working days after detecting emissions. In making this determination, owners or operators may use techniques other than approved instrument monitoring methods.
 - III.F.2.k. For pneumatic controllers not operating properly, the owner or operator must conduct enhanced response or follow manufacturer specifications to return the pneumatic controller to proper operation.
- III.F.3. Enhanced response and remonitoring

- III.F.3.a. Enhanced response must begin no later than five (5) working days and the pneumatic controller returned to proper operation no later than thirty (30) working days after determining the pneumatic controller is not operating properly, unless parts are unavailable, the equipment requires shutdown to complete enhanced response, or other good cause exists. If parts are unavailable, they must be ordered promptly and enhanced response conducted within fifteen (15) working days of receipt of the parts. If shutdown is required, enhanced response must be conducted during the next scheduled shutdown. If delay is attributable to other good cause, enhanced response must be completed within fifteen (15) working days after the cause of delay ceases to exist.
- III.F.3.b. Within fifteen (15) working days of completion of enhanced response, the owner or operator must verify the pneumatic controller is operating properly. In verifying proper operation, owners or operators may use techniques other than approved instrument monitoring methods.
- III.F.3.c. Pneumatic controllers found emitting detectable emissions are not subject to enforcement by the Division unless the owner or operator fails to determine whether the pneumatic controller is operating properly in accordance with Section III.F.2., perform any necessary enhanced response in accordance with Section III.F.3., keep records in accordance with Section III.F.4., or submit reports in accordance with Section III.F.5.
- III.F.4. Owners or operators must maintain the following records for a minimum of three (3) years and make records available to the Division upon request.
 - III.F.4.a. The date, facility name, facility AIRS ID or facility location if the facility does not have an AIRS ID, and approved instrument monitoring method used for each inspection;
 - III.F.4.b. A list of pneumatic controllers, including type, determined to be not operating properly;
 - III.F.4.c. For intermittent pneumatic controllers observed to have detectable emissions but determined to be operating properly, a brief explanation of the basis for concluding that the intermittent pneumatic controller was operating properly. The explanation can include, but is not limited to, an owner or operator's standard operating procedure detailing how to determine whether an intermittent pneumatic controller is operating properly, or an individual explanation;
 - III.F.4.d. The date(s) of enhanced response and a description of the actions taken to return the pneumatic controller to proper operation;
 - III.F.4.e. The date the owner or operator verified the pneumatic controller was returned to proper operation; and

- III.F.4.f. The delayed repair list, including the date and duration of any period where the enhanced response was delayed beyond thirty (30) days after determining the pneumatic controller is not operating properly due to unavailable parts, required shutdown, or delay for other good cause, the basis for the delay, and the schedule for returning the pneumatic controller to proper operation. Delay of enhanced response due to unavailable parts must be reviewed, and a record kept of that review, by a representative of the owner or operator with responsibility for pneumatic controller inspection and enhanced response compliance functions. This review will not be made by the individual making the initial determination to place a part on the delayed repair list.
- III.F.5. Owners or operators of pneumatic controllers at well production facilities or natural gas compressor stations must submit a single annual report on or before May 31st of each year (beginning May 31st, 2019 for facilities in the 8-Hour Ozone Control Area and May 31st, 2021, for facilities outside the 8-Hour Ozone Control Area) that includes, at a minimum, the following information regarding pneumatic controller inspection and enhanced response activities at their subject facilities conducted the previous calendar year. Owners or operators of pneumatic controllers at natural gas processing plants must submit the annual report on or before May 31st of each year beginning 2024.
- III.F.5.a. The total number and type of pneumatic controllers returned to proper operation, the types of actions taken to return the pneumatic controllers to proper operation, and the facility type (by inspection frequency tier of well production facility or natural gas compressor station);
- III.F.5.b. The number and type of pneumatic controllers on the delayed repair list as of December 31 broken out by the facility type (by inspection frequency tier of well production facility or natural gas compressor station), and the basis for each delay; and
- III.F.5.c. The record of all reviews conducted for delayed repairs due to unavailable parts extending beyond 30 days for the previous calendar year.

IV. (State Only) Control of Emissions from Natural Gas Transmission and Storage Segment

IV.A. Definitions

- IV.A.1. "Best management practice" (BMP) means a demonstrated and commercially available or innovative emission-reducing technology or work practice.
- IV.A.2. "Best management practices plan" (BMP plan) means a written plan that includes, but is not limited to, each natural gas transmission and storage segment owner or operator's planned and implemented BMPs to reduce methane emissions from its facilities within the natural gas transmission and storage segment.
- IV.A.3. "Natural gas transmission and storage segment" (segment) includes onshore natural gas transmission pipelines, onshore natural gas transmission compression, underground natural gas storage, and liquefied natural gas (LNG) storage, as these terms are defined in 40 CFR Part 98, Section 98.230 (October 22, 2015), that are physically located in Colorado.

- IV.A.4. "Natural gas transmission and storage segment Colorado throughput" (segment throughput) means the total volume of natural gas, as adjusted for methane, transported through transmission pipelines in Colorado as reported to the Department of Energy's (DOE) Energy Information Administration (EIA) for Form 176, excluding net volumes stored as liquefied natural gas or in underground storage facilities.
- IV.A.5. "Natural gas transmission and storage segment emissions inventory protocol" (inventory protocol) means the requirements by which natural gas transmission and storage segment owners or operators will quantify and report methane, ethane, carbon monoxide (CO), carbon dioxide (CO₂), nitrous oxide (N₂O), nitrogen oxides (NO_x), and volatile organic compound (VOC) emissions. The protocol will specify the segment facilities and types of activity data collected, emissions quantification methodologies, throughput calculation methodologies, criteria for determining whether events are beyond the control of the owner or operator, and the process for designating and protecting confidential business information (CBI), consistent with Colorado law.
- IV.A.6. "Performance-based program" means a program of BMPs implemented and documented by each natural gas transmission and storage segment owner or operator to reduce methane emissions in order to achieve the system-wide emissions intensity target.
- IV.A.7. "Steering committee" means five members approved by the Division to serve as a technical working group for developing program guidance documents and evaluating progress against the system-wide emissions intensity target. The committee members will include two representatives from natural gas transmission and storage segment owners or operators (or industry trade organizations representing owners or operators), two members representing the general public (including but not limited to environmental organizations, local government groups, or citizens), and one Division member.
- IV.A.8. "Segment-wide emissions intensity" means the natural gas transmission and storage segment methane emissions divided by the natural gas transmission and storage segment throughput.
- IV.A.9. "Segment-wide emissions intensity target" (segment-wide target) means the target established by the steering committee reflected as annual segment-wide methane emissions from Colorado's natural gas transmission and storage segment divided by the annual natural gas transmission and storage segment Colorado throughput.
- IV.B. Beginning January 1, 2020, each segment owner or operator must participate in this performance based program to reduce segment-wide methane emissions.
- IV.B.1. By April 1, 2020, a steering committee charter and the steering committee members will be approved by the Division.
- IV.B.2. By September 30, 2020, the Division will publish the inventory protocol and any associated program guidance documents developed by the steering committee.
- IV.B.3. By December 31, 2020, each segment owner or operator must develop a company-specific BMP plan. The BMP plan must contain each element from the BMP plan template chapter of the program guidance document, which will include, but is not limited to, a list of information the owner or operator must collect to demonstrate the BMPs performed. By December 31st of each year (beginning December 31st, 2021), each owner or operator must review and update, as appropriate, its company-specific BMP plan and document in the BMP plan any changes.
- IV.B.4. Beginning January 1, 2021, each segment owner or operator will:

- IV.B.4.a. Implement company specific BMP plans.
- IV.B.4.b. Collect emissions inventory data in accordance with the inventory protocol and its company-specific BMP plan.
- IV.B.5. By May 1, 2022, the segment owners or operators will select a third-party contractor from a pool of qualified applicants to receive, safeguard, and aggregate company-specific reports as described in Sections IV.D.3. and IV.D.4. The steering committee will establish criteria for the selection of the third-party contractor. The segment owners and operators will use a competitive bidding process to solicit applications from contractors who meet the criteria and will provide an opportunity for the steering committee to reject unqualified applicants.
- IV.B.6. By October 1, 2023, the steering committee will determine the segment-wide emissions intensity target using the 2021 and 2022 emissions inventory data. In developing the initial or updated segment-wide emissions intensity target and evaluating the program, the steering committee may request non-company specific information from the Division (in accordance with the Colorado Open Records Act) or the third-party contractor to assist in setting such target or such evaluation. The steering committee may ask companies to explain emission factors and methodologies used to calculate or measure emissions.
- IV.C. The segment-wide emissions intensity target must first be achieved by January 1, 2025, based on the 2024 reporting year.
 - IV.C.1. By October 1 of each year (beginning October 1, 2025), the steering committee will submit a compliance certification to the Division that the segment achieved the segment-wide emissions intensity target for the prior calendar year.
 - IV.C.2. If the steering committee cannot certify compliance with the segment-wide emissions intensity target, the steering committee will develop a plan (which may include amendments to program guidance documents) and timeline for the segment to achieve compliance with the segment-wide emissions intensity target.
 - IV.C.3. Beginning January 1, 2026, and every three (3) years thereafter if appropriate, the steering committee will assess the segment-wide emissions intensity target for continual improvement.
- IV.D. Recordkeeping and reporting
 - IV.D.1. The Division will provide an update on the development of this program and initial implementation efforts to the Air Quality Control Commission during a scheduled Commission meeting on or after January 2021.
 - IV.D.2. Segment owners or operators must maintain BMP plans and emissions inventory reports for a period of five (5) years and make records available to the Division upon request.
 - IV.D.3. By June 30 of each year (beginning June 30, 2022), owners or operators of the natural gas transmission and storage segment will submit company-wide reports to the third-party contractor.

- IV.D.3.a. Emissions claimed to be beyond the control of the owner or operator, using the criteria and methods established by the steering committee, must be included in the company-wide report but will not be used to set or determine compliance with the segment-wide emissions intensity target.
- IV.D.3.b. Emissions and emission reductions associated with any requirements of the Pipeline and Hazardous Materials Safety Administration (PHMSA), the Colorado Public Utilities Commission (CPUC), and/or the Federal Energy Regulatory Commission (FERC) must be included in the report and used for purposes of calculating compliance with the system-wide emissions intensity target, unless they qualify under Section IV.D.3.a., but this Section IV. does not supersede or alter these agencies applicable regulations or requirements.
- IV.D.4. The third-party contractor must aggregate the company-wide reports into a segment-wide report and provide it to the steering committee by August 15 of each year (beginning August 15, 2022) on a form developed by the steering committee and approved by the Division. The segment-wide report must include, at a minimum
 - IV.D.4.a. The segment-wide emissions, apportioned by county,
 - IV.D.4.b. A report of the numbers and types of events subject to Section IV.D.3.a. and the segment-wide emissions resulting from each type of event.
 - IV.D.4.c. The BMPs implemented to mitigate or avoid emissions and a description of how the BMPs mitigate, reduce, and/or avoid emissions.
 - IV.D.4.d. The segment-wide segment throughput.
 - IV.D.4.e. The segment-wide emissions intensity. If the steering committee determines that one or more types of events reported under Section IV.D.4.b. were not beyond the control of the owner or operator, the steering committee will revise the segment-wide emissions intensity calculation to include the methane emissions from those events.
- IV.D.5. Segment owners or operators must submit an annual certification to the Division by June 30 of each year (beginning June 30, 2021) that includes
 - IV.D.5.a. A certification that the company-specific BMP plan was developed or reviewed in accordance with Section IV.B.3.
 - IV.D.5.b. A certification that the company-wide report was submitted to the third-party contractor in accordance with Section IV.D.3.
 - IV.D.5.c. Beginning in 2022, a certification of company BMP plan compliance in accordance with Section IV.B.4., including
 - IV.D.5.c.(i) The company's implementation of the BMPs in the company-specific BMP plan.
 - IV.D.5.c.(ii) Instances of non-conformance with the company-specific BMP plan, reason(s) for non-conformance, and any modifications of the applicable element(s) of the BMP plan.

IV.D.5.c.(iii) Any use of alternative emission reduction approaches not specified in the company-specific BMP plan.

IV.D.5.d. With each submission under Sections IV.D.5.a. through IV.D.5.c., a certification by a responsible official that, based on information and belief after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

IV.D.6. The Division may provide an update briefing to the Air Quality Control Commission during a scheduled Commission meeting on or after October 1 of each year (beginning October 1, 2022). The update briefing will include any assessment of the segment-wide target, as specified in Section IV.C.3.

V. (State Only) Oil and Natural Gas Operations Emissions Inventory

V.A. Applicability

V.A.1. On or before June 30th, 2021 (and on June 30th each year thereafter), the owner or operator of oil and natural gas operations and equipment at or upstream of a natural gas processing plant in Colorado must submit a single annual report that includes actual emissions and specified information in the Division-approved report format.

V.A.2. On or before June 30th, 2022 (and on June 30th each year thereafter), the owner or operator of class II disposal well facilities that are not subject to reporting under Section IV. must submit a single annual report that includes actual emissions and specified information in the Division-approved report format.

V.B. General reporting requirements

V.B.1. The following information must be reported in accordance with Section V.A.

V.B.1.a. Company name, physical street address, and name and contact information of the company representative, for reporting purposes.

V.B.1.b. The date of submittal and the year covered by the report.

V.B.1.c. A list of the activities or equipment, as specified in Section V.C., for which emissions are reported. Beginning with the June 2022 report for the calendar year 2021, owners or operators must include whether the activities or equipment are located in a disproportionately impacted community.

V.B.1.d. Beginning with the June 2022 report for calendar year 2021, for well production facilities, a list of each well production facility, all associated wells by API number and associated location ID as assigned by the Colorado Oil and Gas Conservation Commission, and the total calendar year production of hydrocarbon liquids, and natural gas as well as throughput of produced water.

V.B.1.e. Beginning with the June 2021 report for calendar year 2020 through the June 2024 report for calendar year 2023:

- V.B.1.e.(i) The company's monthly actual emissions of volatile organic compounds (VOC), oxides of nitrogen (NO_x), nitrous oxide (N₂O), carbon dioxide (CO₂), carbon monoxide (CO), methane, and ethane for each month of May through September, in accordance with Division- accepted calculation methods.
- V.B.1.e.(ii) The company's annual actual emissions of VOCs, NO_x, N₂O, CO₂, CO, methane, and ethane for the entire calendar year, in accordance with Division-accepted calculation methods.
- V.B.1.f. Beginning with the June 2025 report for calendar year 2024, the company's monthly actual emissions of VOCs, NO_x, N₂O, CO₂, CO, methane, and ethane, in accordance with Division-accepted calculation methods.
- V.B.1.g. The actual emissions of VOCs, NO_x, N₂O, CO₂, CO, methane, and ethane for each activity or equipment listed in Section V.C. per facility, or per pipeline between facilities where the pipeline is not located at a stationary source, in accordance with Division- accepted calculation methods.
 - V.B.1.g.(i) Beginning with the June 2021 report for calendar year 2020 through the June 2024 report for calendar year 2023:
 - V.B.1.g.(i)(A) The report must include the actual emissions from each activity or equipment per month for each month of May through September.
 - V.B.1.g.(i)(B) The report must include the actual emissions from each activity or equipment for the entire calendar year.
 - V.B.1.g.(ii) Beginning with the June 2025 report for calendar year 2024, the report must include the monthly actual emission from each activity or equipment.
- V.B.1.h. Beginning with the June 2022 report for calendar year 2021 through the June 2023 report for calendar year 2022, if the emissions reported for any activities or equipment, as specified in Section V.C., are calculated using a method other than what was used to report to the U.S. EPA under the federal Greenhouse Gas Reporting Program (40 CFR Part 98) for the same activity or equipment, the owner or operator must submit supporting documentation with the annual report that includes the emissions information reported to the EPA, an explanation of the difference in emissions reported to the Division, the emission calculation method(s) used to report to the Division, and a justification and supporting documentation for using a method other than that for the Greenhouse Gas Reporting Program. If the Division determines that the use of a different calculation method was not justified, the owner or operator must revise the report accordingly, to use the same calculation method as that reported under the federal Greenhouse Gas Reporting Program or other Division-approved method.

- V.B.1.i. Emission factors, beginning with the June 2022 report for calendar year 2021, where emission factors are used to calculate emissions reported pursuant to Section V.B.1.
 - V.B.1.i.(i) Where the Division has published a default emission factor, owners or operators submitting reports under this section must use the state default factor or other Division- accepted emission factor.
 - V.B.1.i.(ii) Owners or operators using a site-specific emission factor must submit documentation to the Division supporting the use of that emission factor with the first annual emission report in which that site-specific emission factor is used (the calendar year 2021 report will be considered the first report for purposes of this section). If subsequent annual emission reports use the same emission factor, operators do not need to resubmit the supporting documentation.
 - V.B.1.i.(iii) Owners or operators using a site-specific emission factor must conduct a gas speciation analysis, a pressurized liquid sampling method, or another Division-accepted analytical method every five (5) years to verify the ongoing accuracy of the site-specific emission factor pursuant to a Division-accepted sampling method or protocol.
- V.B.1.j. A certification by the company representative that supervised the development and submission of the inventory report that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- V.B.2. The owner or operator must submit a revised annual report after discovering that an annual report submitted within the previous two (2) years contained one or more substantive errors. A substantive error is a mass of emissions of any individual pollutant subject to reporting under Section V. that is at least 10% higher or lower than the mass of emissions of the pollutant reported across the owner or operator's activity or equipment, as listed in Section V.C., in Colorado. A refinement of or improvement to an emissions estimation technique or emission factor is not a substantive error but must be noted in the subsequent annual report after the refinement or improvement. Revised annual reports must be submitted by August 31 if the substantive error is discovered between January 1 and June 30, and by February 28 if the substantive error is discovered between July 1 and December 31 of the preceding calendar year.
- V.C. Beginning July 1, 2020, and each calendar year thereafter, owners or operators must maintain the following information for inclusion in the annual report, except that beginning January 1, 2021, owners or operators must maintain the information described in Sections V.C.2.g. and V.C.2.h. Beginning May 1, 2021, owners or operators of class II disposal well facilities must maintain the following information for inclusion in the annual report.
 - V.C.1. AIRS number of the activity or equipment and associated facility or pipeline (if a pipeline between facilities) location, including latitude and longitude coordinates. If the activity or equipment does not have an AIRS number, a description of the activity or equipment.
 - V.C.2. Actual emissions from each activity or equipment listed, unless otherwise specified in the Division-approved report format, and the emission factor(s), assumptions, calculation methodology used to calculate the emissions, and other supporting information on the Division-approved form.

- V.C.2.a. Abnormal events, except those reported as malfunctions under the Common Provisions or in another activity or equipment.
- V.C.2.b. Acid gas removal units.
- V.C.2.c. Associated gas venting and flaring, aggregated per facility. Beginning with the June 2023 report for calendar year 2022, owners or operators must measure or estimate the volume of natural gas that is vented or flared during drilling, completion, and production operations.
- V.C.2.d. Blowdowns from facility equipment or piping where the physical volume of the piping between isolation valves is greater than or equal to 50 cubic feet, aggregated per activity below per facility. Beginning with the June 2024 report for calendar year 2023, owners or operators must report this information for all blowdowns from facility equipment and piping, where the physical volume between isolation valves is greater than or equal to 1 cubic foot.
 - V.C.2.d.(i) Pipeline venting within the facility boundary.
 - V.C.2.d.(ii) Compressors.
 - V.C.2.d.(iii) Scrubbers/strainers.
 - V.C.2.d.(iv) Pig launchers and receivers, through the June 2022 report for calendar year 2021.
 - V.C.2.d.(v) Emergency shutdowns (regardless of equipment type).
 - V.C.2.d.(vi) Through the June 2023 report (for calendar year 2022), all other equipment (including pipelines, compressor case or cylinders, manifolds, suction bottles, discharge bottles, and vessels) with a physical volume between isolation valves greater than or equal to 50 cubic feet.
 - V.C.2.d.(vii) Beginning with the June 2024 report for calendar year 2023, all other equipment (including pipelines, compressor case or cylinders, manifolds, suction bottles, discharge bottles, and vessels), where the physical volume between isolation valves is greater than or equal to 1 cubic foot.
 - V.C.2.d.(viii) Beginning with the June 2024 report for calendar year 2023, best practices employed pursuant to Section II.H.4.
- V.C.2.e. Boilers.
- V.C.2.f. Centrifugal compressor leaks or vents, aggregated per facility. Beginning with the June 2025 report for calendar year 2024, centrifugal compressor leaks or vents must be aggregated per compressor.
- V.C.2.g. Class II disposal well facility fluids accepted for injection. Owners or operators will take periodic, representative samples of the liquids for estimating emissions for the annual report.
- V.C.2.h. Class II disposal well facility produced water ponds.

- V.C.2.i. Drilling mud and mud pits.
- V.C.2.j. Flares and enclosed combustion devices, where not otherwise reported in the emissions of another emissions source category.
- V.C.2.k. Fugitive emissions from components, aggregated per facility. Beginning with the June 2022 report for calendar year 2021, gas composition data and component counts used in fugitive emissions calculations must be provided.
- V.C.2.l. Hydrocarbon liquid storage tanks.
- V.C.2.m. Hydrocarbon liquid loadout.
- V.C.2.n. Maintenance and safety, where not otherwise reported in the emissions of another emissions source category. Beginning with the June 2023 report for calendar year 2022, owners or operators must report the basis for each maintenance or safety event.
- V.C.2.o. Natural gas dehydration (glycol and desiccant).
- V.C.2.p. Natural gas pneumatic controllers, aggregated per facility. Pneumatic controllers at the wellhead must be aggregated with the associated facility or be reported pursuant to a different Division-approved format.
- V.C.2.q. Natural gas pneumatic pumps, aggregated per facility. Pneumatic pumps at the wellhead must be aggregated with the associated facility or be reported pursuant to a different Division-approved format.
- V.C.2.r. Non-road internal combustion engines.
- V.C.2.s. Pigging operations, including pig launchers and receivers. Beginning with the June 2023 report for calendar year 2022, emissions from pigging operations must be separately identified in the annual report from other operational activities, and aggregated by pigging unit.
 - V.C.2.s.(i) Beginning with the June 2024 report for calendar year 2023, capture or control methods or best practices employed pursuant to Sections II.H.1., II.H.2., or II.H.4. per pigging unit.
- V.C.2.t. Pipeline segments between facilities.
- V.C.2.u. Process heaters.
- V.C.2.v. Produced water storage tanks.
- V.C.2.w. Produced water loadout.
- V.C.2.x. Reciprocating compressor leaks or vents, aggregated per facility. Beginning with the June 2023 report for calendar year 2022, reciprocating compressor leaks or vents must be aggregated per compressor.

- V.C.2.y. Separators (e.g., two-phase separators, three-phase separators, high/low pressure separators, heater-treaters, vapor recovery towers, etc.). Beginning with the June 2022 report for calendar year 2021, stages of separation must be identified.
- V.C.2.z. Stationary combustion turbines.
- V.C.2.aa. Stationary compression ignition internal combustion engines.
- V.C.2.bb. Stationary spark ignition internal combustion engines.
- V.C.2.cc. Temporary completion and/or workover equipment (e.g., tanks).
- V.C.2.dd. Thermal oxidizing units, where not otherwise reported in the emissions of another emissions source category.
- V.C.2.ee. Well completions (includes flowback).
- V.C.2.ff. Well workovers.
- V.C.2.gg. Wellhead bradenhead.

V.D. Annual information reporting

- V.D.1. Beginning in 2022, and each calendar year thereafter, the Division must prepare and send an annual information report to the Commission and the Colorado Oil and Gas Conservation Commission. The report must include:
 - V.D.1.a. Summary and analysis of oil and gas emissions data received or produced by the Division, including but not limited to
 - V.D.1.a.(i) Oil and gas annual emissions reporting under Section V.;
 - V.D.1.a.(ii) An update on the Division's leak detection and repair program, including a summary of information reported under Section II.E., as well as the results of any aerial and ground-based surveys performed by or at the direction of the Division;
 - V.D.1.a.(iii) Data collected from early production operations monitoring data reported to the Division under Section VI.; and
 - V.D.1.a.(iv) Greenhouse gas intensity plans and annual verifications submitted pursuant to Sections VIII.E. and VIII.G., specifically regarding the technologies and measures employed to reduce emissions from oil and gas production.
 - V.D.1.b. An evaluation of the progress toward the goals set forth in the Greenhouse Gas Pollution Reduction Roadmap; and any initiatives developed by the Division to achieve Colorado's statewide greenhouse gas emission reductions, and the role of oil and the role of oil and gas operations in achieving the reduction targets for the oil and gas sector;

- V.D.1.c. Information regarding ambient air quality standard attainment, trends, and contributions from oil and gas operations, including ground-level ozone ambient air quality standards as presented to the Commission during the annual ozone presentation;
 - V.D.1.d. A summary of information collected pursuant to the community-based air toxics monitoring program performed by the Division under § 25-7-141(6), CRS;
 - V.D.1.e. Opportunities for inter-agency coordination, including workgroups, or basin-wide, statewide, or other regional studies to evaluate and address air quality issues related to oil and gas production; and
 - V.D.1.f. Additional information requested by the Commission or that the Division determines is relevant to achieving the state's greenhouse gas emission reduction targets or ozone attainment.
- V.D.2. When transmitting information to the Colorado Oil and Gas Conservation Commission pursuant to Section V.D.1., the Division must make the report available to the public on the Division's website.
- V.D.3. The Division must include the relevant annual information provided to the Colorado Oil and Gas Conservation Commission as part of the Division's report submitted every odd-numbered year to the General Assembly pursuant to § 25-7-105(1)(e)(V)), CRS. The Division must also submit the Division's General Assembly report to the Colorado Oil and Gas Conservation Commission.

VI. (State Only) Oil and Natural Gas Pre-Production, Early Production and Production Operations

VI.A. Definitions

- VI.A.1. "Commencement of operation" means when a source first conducts the activity that it was designed and permitted for. In addition, for oil and gas well production facilities, commencement of operation is the date any permanent production equipment is in use and product is consistently flowing to sales lines, gathering lines, or storage tanks from the first producing well at the stationary source, but no later than end of well completion operations (including flowback).
- VI.A.2. "Controlling interest" means an interest that provides a person, either directly or indirectly, the power to direct or cause the direction of the management and policies of another person, whether through ownership or voting securities, by contract, or otherwise.
- VI.A.3. "Cumulatively impacted community" means a census block group within the disproportionately impacted community layer in Colorado EnviroScreen (Version 1.0) with a Colorado EnviroScreen (Version 1.0) score above the 80th percentile.
- VI.A.4. "Disproportionately impacted community" means a census block group that satisfies one or more of the following.
- VI.4.a. The proportion of the population living in households that are below two hundred percent of the federal poverty level is greater than forty percent.

- VI.4.b. The proportion of households that spend more than thirty percent of household income on housing is greater than fifty percent.
- VI.4.c. The proportion of the population that identifies as people of color is greater than forty percent.
- VI.4.d. The proportion of the population that is linguistically isolated is greater than twenty percent.
- VI.4.e. Multiple factors, including socioeconomic stressors, vulnerable populations, disproportionate environmental burdens, vulnerability to environmental degradation or climate change, and lack of public participation may act cumulatively to affect health and the environment and may contribute to persistent disparities.
- VI.A.5. "Drill-out" means the process of removing the plugs placed during hydraulic fracturing or refracturing. Drill-out ends after the removal of all stage plugs and the initial wellbore clean-up.
- VI.A.6. "Drilling" or "drilled" means the process to bore a hole to create a well for oil and/or natural gas production.
- VI.A.7. "Flowback" means the process of allowing fluids and entrained solids to flow from a well following stimulation, either in preparation for a subsequent phase of treatment or in preparation for cleanup and placing the well into production. The term flowback also means the fluids and entrained solids flowing from a well after drilling or hydraulic fracturing or refracturing. Flowback ends when all temporary flowback equipment is removed from service. Flowback does not include drill-out.
- VI.A.8. "Flowback vessel" means a vessel that contains flowback.
- VI.A.9. "Hydraulic fracturing" means the process of directing pressurized fluids containing any combination of water, proppant, and any added chemicals to penetrate tight formations, such as shale, coal, and tight sand formations, that subsequently require flowback to expel fracture fluids and solids.
- VI.A.10. "Hydraulic refracturing" means conducting a subsequent hydraulic fracturing operation at a well that has previously undergone a hydraulic fracturing operation.
- VI.A.11. "kBOE" means production of hydrocarbon liquids and natural gas, measured in thousands of barrels of oil equivalent.
- VI.A.12. "Majority operator" means an operator with company-wide production in the 8-hour ozone control area and/or northern Weld County in the calendar year immediately prior to the applicable NOx intensity target year of greater than 50,000 kBOE.
- VI.A.13. "Midstream segment" means the oil and natural gas compression segment and the natural gas processing segment that are upstream of the natural gas transmission and storage segment.
- VI.A.14. "Minority operator" means an operator with company-wide production in the 8-hour ozone control area and/or northern Weld County in the calendar year immediately prior to the applicable NOx intensity target year of greater than 45 kBOE but less than or equal to 50,000 kBOE.

VI.A.15. "Pre-production operations" means the drilling through the hydrocarbon bearing zones, hydraulic fracturing or refracturing, drill-out, and flowback of an oil and/or natural gas well.

VI.A.16. "Tank measurement system" means equipment and methods used to determine the quantity of the liquids inside a flowback vessel without requiring direct access through the flowback vessel thief hatch or other opening.

VI.A.17. "Upstream segment" means oil and natural gas exploration and production operations located upstream of the midstream segment.

VI.A.18. "Well" means a hole drilled for the purpose of producing oil and/or natural gas.

VI.A.19. "Well completion" means the process that allows for the flow of petroleum and/or natural gas from newly drilled wells, to expel drilling and reservoir fluids, and to test the reservoir flow characteristics (e.g., hydraulic fracturing, drill-out, flowback).

VI.A.20. "Well re-completion" means the process that allows for the flow of petroleum and/or natural gas from an existing well from any geological interval not currently producing in the existing well, to expel drilling and reservoir fluids, and to test the reservoir flow characteristics (e.g., hydraulic re-fracturing, drill-out, flowback).

VI.B. General provisions

VI.B.1. At all times the facility and equipment must be maintained and operated in a manner consistent with good air pollution control practices for minimizing emissions.

VI.B.2. Air pollution control equipment must be operated and maintained pursuant to the manufacturing specifications or equivalent to the extent practicable and consistent with technological limitations and good engineering and maintenance practices.

VI.C. Air quality monitoring

VI.C.1. Owners or operators of drilling operations that begin on or after May 1, 2021, must monitor air quality at and/or around the pre-production and early production operations.

VI.C.1.a. Owners or operators must monitor air quality for at least ten (10) days prior to beginning pre-production operations, during all pre-production operations, and for at least six months after the well is capable of consistently producing either separable gas or salable liquid hydrocarbons (i.e., early production).

VI.C.1.b. Owners or operators must submit an air quality monitoring plan to the Division and the local government with jurisdiction over the location of the operations and any other local government unit, where applicable, within 2,000 feet of the proposed operations at least sixty (60) days prior to beginning air quality monitoring. Upon the request of any of these local government units within 14 days of receiving the plan, the Division will consult with them as part of its review process. Owners or operators must receive approval from the Division of the air quality monitoring plan prior to beginning air quality monitoring. Owners or operators must comply with the plan once approved. The air quality monitoring plan must include, at a minimum:

VI.C.1.b.(i) The owner or operator name and the contact information of the owner or operator representative for monitoring purposes.

- VI.C.1.b.(ii) The planned schedule for drilling and pre-production operations.
- VI.C.1.b.(iii) The operations to be monitored including the API number of the well(s), location of the operations including latitude and longitude coordinates, and any associated facility or equipment AIRS number(s).
- VI.C.1.b.(iv) Whether the local government with jurisdiction over the location of the operations has air quality monitoring requirements applicable to pre-production and/or early production operations, a description of those requirements, and a local government contact for air quality monitoring purposes.
- VI.C.1.b.(v) The monitoring objective(s), which must include one or more of the following (and may include additional objectives such as field-testing new air quality monitoring technologies or improving emissions inventories):
 - VI.C.1.b.(v)(A) Detect, evaluate, and reduce as necessary hazardous air pollutant emissions;
 - VI.C.1.b.(v)(B) Detect, evaluate, and reduce as necessary ozone precursor emissions;
 - VI.C.1.b.(v)(C) Detect, evaluate, and reduce as necessary methane emissions.
- VI.C.1.b.(vi) The air pollutant(s) and other parameters to be monitored. Pollutants must include at least one of the following: total VOCs, methane, benzene or BTEX (benzene, toluene, ethyl benzene and xylenes) or other indicator of hydrocarbon emissions from pre-production and early production operations, as appropriate to meeting the specified monitoring objectives.
- VI.C.1.b.(vii) A description of the monitoring equipment to be deployed, including the manufacturer and model information and any manufacturer specifications for the monitoring equipment and data systems. The description of pollutant monitoring equipment should explain why it was chosen and document or provide references describing relevant prior use and evaluations that are known to the owner or operator.
- VI.C.1.b.(viii) A description of the meteorological monitoring equipment to be deployed. If meteorological data will not be collected on-site, the plan must provide reasoning and justification, and identify the meteorological station from which data will be obtained and demonstrate that the station represents conditions at the oil and gas development site.
- VI.C.1.b.(ix) A monitor siting plan, which must include but is not limited to:
 - VI.C.1.b.(ix)(A) The number of monitors and/or sensors to be deployed.

- VI.C.1.b.(ix)(B) The location and height of the monitoring equipment, including for each phase of operations if location and height of the equipment will change (e.g., monitoring placement impacted by sound walls).
- VI.C.1.b.(ix)(C) A topographic map and plan of the site, showing the expected equipment layout, including air quality and meteorological monitor locations and their distance from pre-production and production operations. The map must indicate any obstructions to air flow to the monitor(s) and also show all roads and access ways within a half-mile of the facility and any contiguous structures, whether or not they are part of the production operations.
- VI.C.1.b.(ix)(D) A description of how the placement of monitoring equipment minimizes surface disturbances, in alignment with the Colorado Oil and Gas Conservation Commission's site preparation requirements.
- VI.C.1.b.(ix)(E) An explanation of how the number and placement of monitoring equipment will be adequate to achieve the desired air quality monitoring objectives, considering the monitoring equipment's detection limit and other limitations.
- VI.C.1.b.(x) The standard operating procedures that will be employed, to include at minimum:
 - VI.C.1.b.(x)(A) The sampling and/or measurement interval, averaging times, minimum detection concentration or level, expected precision, and confidence level at which pollutant data will be reported.
 - VI.C.1.b.(x)(B) The response level for each pollutant or indicator monitored and/or sampled and the response procedures or actions that will be taken if elevated levels are observed.
 - VI.C.1.b.(x)(C) The data quality indicators for precision and bias of the monitoring equipment.
 - VI.C.1.b.(x)(D) The quality control and quality assurance procedures, including calibration intervals and frequency, which will be used to ensure proper operation of the monitoring equipment. Owners or operators may reference and attach an existing methodology.
 - VI.C.1.b.(x)(E) A discussion of known limitations of the pollutant monitoring equipment and, if applicable, how they will be addressed.

- VI.C.1.b.(x)(F) The protocol that will be used for acquiring, processing, and recording relevant meteorological data.
- VI.C.1.b.(x)(G) The data system and operating protocol to be used for data collection, including, but not limited to, data logging, data processing, recording, downloading, backup and storage, and reporting.
- VI.C.1.b.(x)(H) The methods for collecting and analyzing speciated or other samples of chemical constituents identified by the Division when indicated necessary based on site-specific concentration thresholds, if applicable.
- VI.C.1.b.(xi) A description of how the monitoring equipment, pollutant(s) monitored, and siting plan are expected to detect elevated emissions and achieve at least one of the monitoring objectives listed in Section VI.C.1.b.(v).
- VI.C.1.c. Within ten (10) days of approving a monitoring plan, the Division will notify all local government units identified in Section VI.C.1.b. of the plan approval.
- VI.C.2. Recordkeeping and reporting
 - VI.C.2.a. Owners or operators must keep the following records for a minimum of three (3) years, unless otherwise specified, and upon request make records available to the Division. Local governments identified in Section VI.C.1.b may request those records from the Division. If the Division has not requested the records and a local government(s) identified in Section VI.C.1.b requests the records from the Division, the Division shall request the records from the owner or operator.
 - VI.C.2.a.(i) The air quality monitoring plan.
 - VI.C.2.a.(ii) Monthly reports and the data necessary to inform the monthly reports, as provided in Section VI.C.2.b.
 - VI.C.2.a.(iii) Activity logs to inform Section VI.C.2.b.(iii)(A) of the monthly report.
 - VI.C.2.a.(iv) For a period of one year after the monthly report, the underlying raw data associated with each monitor.
 - VI.C.2.a.(v) For a period of one year after the monthly report, the meteorological data in the time intervals as close to the sampling and/or measurement intervals as possible.
 - VI.C.2.b. Owners or operators must submit monthly reports of monitoring conducted to the Division by the last day of the month following the previous month of monitoring (e.g., by June 30 for the previous May 1-31), including
 - VI.C.2.b.(i) The month and year of the monitoring period.

- VI.C.2.b.(ii) A description of the monitoring equipment and the pollutant(s) monitored.
- VI.C.2.b.(iii) A description of the monitored operations including
 - VI.C.2.b.(iii)(A) The phase of operation (e.g., prior to pre-production, during pre-production operations, early production) and activities occurring during the monitored period.
 - VI.C.2.b.(iii)(B) API number of the well(s).
 - VI.C.2.b.(iii)(C) Location of the operations, including latitude and longitude coordinates.
 - VI.C.2.b.(iii)(D) Any associated facility or equipment AIRS number(s).
 - VI.C.2.b.(iii)(E) The date, time, and duration of any monitoring equipment downtime.
 - VI.C.2.b.(iii)(F) The date, time, and duration of operations malfunctions and shut-in periods or other events investigated for influence on monitoring.
- VI.C.2.b.(iv) For the first monthly report after beginning monitoring during pre-production operations, a summary of air quality condition results monitored prior to beginning pre-production operations, including time series of the results at hourly or higher time resolution and a statistical summary of the air quality results monitored prior to beginning pre-production operations, including number of observations, maximum concentrations or levels, periodic averages, and data distributions including 5th, 25th, median, 75th and 95th percentile values.
- VI.C.2.b.(v) A summary of monitored air quality results, including time series plots as hourly or higher time resolution and a statistical summary including number of observations, maximum concentrations or levels, periodic averages, and data distributions including 5th, 25th, median, 75th and 95 percentile values.
- VI.C.2.b.(vi) A description of responsive action(s) taken as a result of monitoring results, including the date; concentration or level measured; correlations with specific events, activities, and/or monitoring thresholds; and any additional steps taken as a result of the responsive action.
- VI.C.2.b.(vii) The results of any speciated or other samples of chemical constituents identified by the Division and collected when site-specific concentrations indicate such samples are necessary.
- VI.C.2.b.(viii) A summary of meteorological data, including in the time intervals identified for concentration readings in the air quality monitoring plan during the time period of responsive action(s). If meteorological data is collected on-site, the meteorological data

assessed in as close to the sampling and/or measurement intervals as possible.

- VI.C.2.b.(ix) A description of how data will be processed, if available from the manufacturer, and summarized for purposes of fulfilling monthly reporting requirements, including whether and how data will be corrected, and how missing data and values that are below detection limits will be treated in statistical summaries.
 - VI.C.2.b.(x) Beginning May 2023, a list of leaking components requiring repair and the monitoring method(s) used to determine the presence of the leak pursuant to Section II.E.
 - VI.C.2.b.(xi) In the last monthly report, a certification by the company representative that supervised the development and submission of the monitoring reports that, based on information and belief formed after reasonable inquiry, the statements and information in the monthly reports are true, accurate, and complete.
- VI.C.3. Owners or operators must notify the Division and the local government with jurisdiction over the location of the operations, using the contact provided in Section VI.C.1.b.(iv), within forty-eight (48) hours of responsive action(s) taken as a result of recorded values in excess of the response level.
- VI.D. Emission reduction from pre-production flowback vessels
- VI.D.1. Control
- VI.D.1.a. Owners or operators of a well with flowback that begins on or after May 1, 2021, must collect and control emissions from each flowback vessel on and after the date flowback is routed to the flowback vessel by routing emissions to and operating air pollution control equipment that achieves a hydrocarbon control efficiency of at least 95%. If a combustion device is used, it must have a design destruction efficiency of at least 98% for hydrocarbons.
 - VI.D.1.a.(i) Owners or operators must use enclosed, vapor-tight flowback vessels.
 - VI.D.1.a.(ii) Flowback vessels must be inspected, tested, and refurbished where necessary to ensure the flowback vessel is vapor-tight prior to receiving flowback.
 - VI.D.1.a.(iii) Owners or operators must use a tank measurement system to determine the quantity of liquids in the flowback vessel(s).
 - VI.D.1.a.(iii)(A) Thief hatches or other access points to the flowback vessel must remain closed and latched during activities to determine the quantity of liquids in the flowback vessel(s).
 - VI.D.1.a.(iii)(B) Opening the thief hatch or other access point if required to inspect, test, or calibrate the tank measurement system or to add biocides or chemicals is not a violation of Section VI.D.1.a.(ii)(A).

VI.D.1.a.(iv) Combustion devices used during pre-production operations must be enclosed, have no visible emissions during normal operation, and be designed so that an observer, by means of visual observation from the outside of the enclosed combustion device, or by other means approved by the Division, determine whether it is operating properly.

VI.D.1.a.(iv)(A) Combustion devices must be equipped with an operational auto-igniter upon installation of the combustion device.

VI.D.2. Monitoring

VI.D.2.a. Owners or operators of a well with flowback that begins on or after May 1, 2021, must conduct daily visual inspections of the flowback vessel and any associated equipment.

VI.D.2.a.(i) Visual inspection of any thief hatch, pressure relief valve, or other access point to ensure that they are closed and properly seated.

VI.D.2.a.(ii) Visual inspection or monitoring of the air pollution control equipment to ensure that it is operating.

VI.D.2.a.(iii) Visual inspection of the air pollution control equipment to ensure that the valves for the piping from the flowback vessel to the air pollution control equipment are open.

VI.D.2.a.(iv) If a combustion device is used, visual inspection of the auto-igniter and valves for piping of gas to the pilot light to ensure they are functioning properly.

VI.D.2.a.(v) If a combustion device is used, inspection of the device for the presence or absence of smoke. If smoke is observed, either the equipment must be immediately shut-in to investigate the potential cause for smoke and perform repairs, as necessary, or EPA Method 22 must be conducted to determine whether visible emissions are present for a period of at least one (1) minute in fifteen (15) minutes.

VI.D.3. Recordkeeping

VI.D.3.a. The owner or operator of each flowback vessel subject to Section VI.D.1. must maintain records for a period of two (2) years and make them available to the Division upon request, including

VI.D.3.a.(i) The API number of the well and the associated facility location, including latitude and longitude coordinates.

VI.D.3.a.(ii) The date and time of the onset of flowback.

VI.D.3.a.(iii) The date and time the flowback vessels were permanently disconnected, if applicable.

- VI.D.3.a.(iii) The date and duration of any period where the air pollution control equipment is not operating.
- VI.D.3.a.(iv) Records of the inspections required in Section VI.D.2. including the time and date of each inspection, a description of any problems observed, a description and date of any corrective action(s) taken, and the name of the employee or third party performing corrective action(s).
- VI.D.3.a.(v) Where a combustion device is used, the date and result of any EPA Method 22 test or investigation pursuant to Section VI.D.2.a.(v).

VI.E. Use and Operational Restrictions for Drilling, Pre-Production, and Production Operations

VI.E.1. Beginning in 2024, owners or operators of drilling and pre-production operations in the 8-hour ozone control area or northern Weld County conducted between May 1 and September 30 must comply with the following use practices.

VI.E.1.a. At operations located in a cumulatively impacted community.

VI.E.1.a.(i) Drill rig engines and/or turbines with a manufacturer's design rate greater than or equal to 50 horsepower must be

VI.E.1.a.(i)(A) Powered by grid power or non-fossil fuel generated power (e.g., solar, geothermal, battery). For owners or operators utilizing this Section VI.E.1.a.(i)(A), other associated non-self-propelled fuel combustion equipment used during drilling, hydraulic fracturing, or hydraulic refracturing of a well (e.g., compressors, pumps, boilers, process heaters, lighting) must be powered by grid power or no-fossil fuel generated power, where technically feasible;

VI.E.1.a.(i)(B) Tier IV diesel engines, which can include the use of dual fuel;

VI.E.1.a.(i)(C) Natural gas generators including, but not limited to, those with battery storage system; or

VI.E.1.a.(i)(D) Other technologies or operational optimization methods as approved by the Division.

VI.E.1.a.(ii) Pumps used for hydraulic fracturing or refracturing must be powered by

VI.E.1.a.(ii)(A) Electricity, natural gas-fired engines, or natural gas-fired turbines; or

VI.E.1.a.(ii)(B) Other technologies or operational optimization methods as approved by the Division.

VI.E.1.b. At operations not located in a cumulatively impacted community.

- VI.E.1.b.(i) Drill rig engines or turbines with a manufacturer's design rate greater than or equal to 50 horsepower must be:
 - VI.E.1.b.(i)(A) Powered by grid power or non-fossil fuel generated power (e.g., solar, geothermal, battery);
 - VI.E.1.b.(i)(B) Tier IV diesel engines, which can include the use of dual fuel;
 - VI.E.1.b.(i)(C) In calendar years 2024 and 2025, Tier II dual fuel engines;
 - VI.E.1.b.(i)(D) Tier II diesel engine combined with operational practices guaranteed by the manufacturer to be Tier IV compliant;
 - VI.E.1.b.(i)(E) Natural gas generators including, but not limited to, those with battery storage system; or
 - VI.E.1.b.(i)(F) Other technologies or operational optimization methods as approved by the Division.
- VI.E.1.b.(ii) Pumps used for hydraulic fracturing or refracturing must be powered by
 - VI.E.1.b.(ii)(A) Electricity, natural-gas fired engines, or natural-gas fired turbines;
 - VI.E.1.b.(ii)(B) Tier IV diesel engines, which can include the use of dual fuel; or
 - VI.E.1.b.(ii)(C) Other technologies or operational optimization methods as approved by the Division.
- VI.E.1.c. The use practices in Sections VI.E.1.a. and VI.E.1.b. do not apply to emergency engines or turbines providing back-up power in case of unexpected power outages.
- VI.E.1.d. All engines and turbines used to drill, hydraulically fracture, or hydraulically refracture operations and other associated equipment used during drilling, hydraulic fracturing, or hydraulic refracturing operations must be operated and maintained pursuant to the manufacturing specifications, recommendations, or equivalent to the extent practicable, and consistent with technological limitations and good engineering and maintenance practices.
- VI.E.2. Beginning in 2024, operators of upstream segment operations (e.g., drilling, pre-production, and well production facilities) in the 8-hour ozone control area or northern Weld County must reduce emissions between May 1 and September 30 and achieve the following NOx intensity targets.
 - VI.E.2.a. Compliance with the NOx intensity targets will be determined for the applicable year using the following calculation, based on the final report submitted pursuant to Part B, Section V. (i.e., ONGAEIR).

$$\text{NOx intensity} = \text{operator May-Sept NOx emissions} / (0.42 * \text{calendar year kBOE})$$

* Operator May-Sept NOx emissions means emissions from all upstream segment activities and equipment in which the majority or minority operator has a controlling interest. NOx emissions is only allocated to one operator for the May-Sept time period.

VI.E.2.b. For calendar year 2024,

VI.E.2.b.(i) Majority operator: 0.034 tons NOx/kBOE.

VI.E.2.b.(ii) Minority operator: 0.073 tons NOx/kBOE.

VI.E.2.c. For calendar year 2025,

VI.E.2.c.(i) Majority operator: 0.028 tons NOx/kBOE.

VI.E.2.c.(ii) Minority operator: 0.060 tons NOx/kBOE.

VI.E.2.d. For calendar year 2026,

VI.E.2.d.(i) Majority operator: 0.027 tons NOx/kBOE.

VI.E.2.d.(ii) Minority operator: 0.058 tons NOx/kBOE.

VI.E.3. Recordkeeping. The following records for wells drilled on or after May 1, 2024, and well production facilities in the 8-hour ozone control area or northern Weld County must be kept for a period of five (5) years and made available to the Division upon request.

VI.E.3.a. For drilling, hydraulic fracturing, and hydraulic refracturing operations located in a cumulatively impacted community, records demonstrating that the use practices in Section VI.E.1.a. were followed between May 1 and September 30.

VI.E.3.b. For drilling, hydraulic fracturing, and hydraulic refracturing operations not located in a cumulatively impacted community, records demonstrating that the use practices in Section VI.E.1.b. were followed between May 1 and September 30.

VI.E.3.c. Records of any engines or turbines used to drill, hydraulically fracture, and hydraulically refracture a well between May 1 and September 30, including AIRS number, if applicable; manufacturer model; horsepower; engine configuration; whether the engine or turbine is grid powered, if applicable; and the emissions tier the engine is certified or guaranteed to meet, if applicable.

VI.E.3.d. A mapped image of the location of the drilling operations that occurred between May 1 and September 30 in relation to any cumulatively impacted community or disproportionately impacted community within 2000 feet of the drilling operations at the time of the drilling operations.

VI.E.3.e. The manufacturer specifications, recommendations, or equivalent specified in Section VI.E.1.c., if applicable.

VI.E.3.f. Records of NOx emissions from well production facilities and wells drilled and/or hydraulically fractured or refractured between May 1 and September 30 and company kBOE.

VI.E.4. Reporting. Beginning November 30, 2024, and by November 30 of 2025 and 2026 thereafter, the owner or operator of wells drilled on or after May 1, 2024, and/or well production facilities in the 8-hour ozone control area or northern Weld County must submit the following information using a Division-approved format.

VI.E.4.a. For each drilling, hydraulic fracturing, and hydraulic refracturing operation occurring May 1 through September 30, the report must include, but is not limited to

- VI.E.4.a.(i) The location of the operations (i.e., not location per well), including latitude and longitude coordinates, and any associated facility or equipment AIRs number(s).
- VI.E.4.a.(ii) An identification of which operations are located within a cumulatively impacted community.
- VI.E.4.a.(iii) The API number of the well(s), if known.
- VI.E.4.a.(iv) The date and duration of drilling, hydraulic fracturing, and hydraulic refracturing of each well.
- VI.E.4.a.(v) An identification of any engines or turbines used to drill, hydraulically fracture, and hydraulically refracture a well, including AIRS number, if applicable; manufacturer model; horsepower; engine configuration; whether the engine is grid powered, if applicable; and the emissions tier the engine is certified or guaranteed to meet, if applicable.
- VI.E.4.a.(vi) Performance test, manufacturer guarantee, or other documentation if claiming a lower emission factor, if applicable.
- VI.E.4.a.(vii) For drilling, hydraulic fracturing, and hydraulic refracturing operations occurring May 1 through September 30 and located in a cumulatively impacted community, a demonstration that the use practices in Section VI.E.1.a. were followed.
- VI.E.4.a.(viii) For drilling, hydraulic fracturing, and hydraulic refracturing operations not located in a cumulatively impacted community, a demonstration that the use practices in Section VI.E.1.b. were followed.
- VI.E.4.a.(ix) An interim report of the drilling, hydraulic fracturing, and hydraulic refracturing operation NOx emissions for the time period of May 1 through September 30.

VI.E.4.b. For each well production facility operating May 1 through September 30, the report must include, but is not limited to

- VI.E.4.b.(i) An identification of each well production facility, including facility name and facility AIRS ID or facility location if the facility does not have an AIRS ID.
- VI.E.4.b.(ii) An identification of which well production facilities are located within a cumulatively impacted community.

- VI.E.4.b.(iii) An interim report of the well production facility NO_x emissions for the time period of May 1 through September 30.
 - VI.E.4.c. Owners or operators of drilling, hydraulic fracturing, hydraulic refracturing operations and well production facilities must submit
 - VI.E.4.c.(i) The company's rolling twelve month total kBOE through September 30.
 - VI.E.4.c.(i)(A) Production can only be allocated to one operator for the same time period. Operators must account for production from all oil or natural gas wells and well production facilities in which the operator holds the controlling interest. Operators must account for production during the time in which the operator holds that controlling interest.
 - VI.E.4.c.(i)(B) Operators must calculate kBOE by adding the production of hydrocarbon liquids in thousand barrels to the proportion of natural gas (calculated by dividing the million standard cubic feet (MMscf) volume of natural gas produced by the conversion rate of 5.8 Mscf/kBOE).
 - VI.E.5. Reporting. Owners or operators must submit an updated report as required in Section VI.E.4. with asset transfers impacting the reporting year by June 30 of the subsequent year (e.g., an updated report including asset transfers impacting 2024 must be submitted by June 30, 2025).
 - VI.E.5.a. Owners or operators that commence drilling, hydraulic fracturing, or hydraulic refracturing operations after May 1 of the compliance year that are transferred or acquired by a different controlling interest must submit documentation of how the NO_x emissions between the commencement of drilling, hydraulic fracturing, or hydraulic refracturing and September 30 and the production between commencement of operation and the end of the calendar year will be allocated between the acquiring operator and selling operator for the purposes of determining compliance with the applicable NO_x intensity target. The selling operator must also report
 - VI.E.5.a.(i) Identification of each drilling, hydraulic fracturing, hydraulic refracturing operation transferred (name and AIRS ID, if applicable), the name of the acquiring operator, and the date of closing of the transaction.
 - VI.E.5.a.(ii) The drilling, hydraulic fracturing, and hydraulic refracturing operation NO_x emissions for the time period of May 1 through September 30.
 - VI.E.5.a.(iii) The drilling, hydraulic fracturing, and hydraulic refracturing operation production for the time period of May 1 through the end of the calendar year.
- VII. (State Only) Reduction of Emissions from Oil and Natural Gas Midstream Segment Fuel Combustion Equipment**

VII.A. Definitions

- VII.A.1. “8-hour ozone control area” means the Counties of Adams, Arapahoe, Boulder (includes part of Rocky Mountain National Park), Douglas, and Jefferson; the Cities and Counties of Denver and Broomfield; and the following portions of the Counties of Larimer and Weld
- VII.A.1.a. For Larimer County (includes part of Rocky Mountain National Park), that portion of the county that lies south of a line described as follows: Beginning at a point on Larimer County’s eastern boundary and Weld County’s western boundary intersected by 40 degrees, 42 minutes, and 47.1 seconds north latitude, proceed west to a point defined by the intersection of 40 degrees, 42 minutes, 47.1 seconds north latitude and 105 degrees, 29 minutes, and 40.0 seconds west longitude, thence proceed south on 105 degrees, 29 minutes, 40.0 seconds west longitude to the intersection with 40 degrees, 33 minutes and 17.4 seconds north latitude, thence proceed west on 40 degrees, 33 minutes, 17.4 seconds north latitude until this line intersects Larimer County’s western boundary and Grand County’s eastern boundary.
- VII.A.1.b. For Weld County, that portion of the county that lies south of a line described as follows: Beginning at a point on Weld County’s eastern boundary and Logan County’s western boundary intersected by 40 degrees, 42 minutes, 47.1 seconds north latitude, proceed west on 40 degrees, 42 minutes, 47.1 seconds north latitude until this line intersects Weld County’s western boundary and Larimer County’s eastern boundary.
- VII.A.2. “Co-benefits” for purposes of Section VII. means the reduction of harmful air pollutants in disproportionately impacted communities.
- VII.A.3. “Company emission reduction plan” or “company ERP” means a plan prepared by a midstream segment owner or operator, consistent with the guidance issued by the midstream steering committee, to achieve that owner or operator’s proportionate reductions of greenhouse gas emissions to meet the requirements of Section VII.
- VII.A.4. “Disproportionately impacted community” (DI community) means census block groups designated as DI communities in CDPHE’s draft Data Viewer for Disproportionately Impacted Communities in Colorado (as of December 17, 2021, at: https://cohealthviz.dphe.state.co.us/t/EnvironmentalEpidemiologyPublic/views/EJActDICommunities-Public/HB21-1266DICommunities?%3AshowAppBanner=false&%3Adisplay_count=n&%3AshowVizHome=n&%3Aorigin=viz_share_link&%3AisGuestRedirectFromVizportal=y&%3Aembed=y) consistent with 24-4-109(2)(b)(II), C.R.S. (2021). A complete list of these census block groups by 12-digit FIPS code will be maintained by the Division and made publicly available.
- VII.A.5. “Harmful air pollutants” for purposes of Section VII. means pollutants designated by EPA as criteria pollutants (carbon monoxide, lead, nitrogen dioxide, ozone, particulate pollution (PM) (PM2.5 and PM10) and sulfur dioxide) or hazardous air pollutants.
- VII.A.6. “Midstream fuel combustion equipment” means engines, turbines, process and other heaters, boilers, and reboilers in the midstream segment.

- VII.A.7. "Midstream segment" means the oil and natural gas compression segment and the natural gas processing segment that are physically located in Colorado and that are upstream of the natural gas transmission and storage segment.
- VII.A.8. "Midstream segment emission reduction plan" or "segment ERP" means a plan establishing the process and timelines for the midstream segment to achieve twenty percent (20%) reduction in greenhouse gas emissions (in CO₂e) from midstream segment fuel combustion equipment by no later than December 31, 2030.
- VII.A.9. "Midstream steering committee" means a committee comprised of members approved by the Division to serve as a technical working group tasked with developing program guidance documents and developing a midstream segment emission reduction plan. To the extent practicable, the committee members will include two members representing the electric utility sector; three members representing the midstream segment (at least one representing the oil and natural gas compression segment and one representing the natural gas processing segment), or industry trade organizations representing owners or operators; at least three local government representatives (one from inside the 8-hour ozone control area and northern Weld County and one from outside the 8-hour ozone control area and northern Weld County); at least three members representing the general public (including a representative of an environmental organization and a representative of a disproportionately impacted community); and at least one Division staff person. The steering committee may also include two additional members: a representative from the Colorado Energy Office and a representative from the Public Utilities Commission.
- VII.A.10. "Natural gas processing segment" means the operations engaged in the separation of natural gas liquids (NGLs) or non-methane gases from produced natural gas, or the separation of NGLs into one or more component mixtures. Separation includes one or more of the following: forced extraction of natural gas liquids, sulfur and carbon dioxide removal, fractionation of NGLs, or the capture of CO₂ separated from natural gas streams. This segment also includes all residue gas compression equipment owned or operated by the natural gas processing plant.
- VII.A.11. "Natural gas transmission and storage segment" includes onshore natural gas transmission pipelines, onshore natural gas transmission compression, underground natural gas storage, and liquefied natural gas (LNG) storage, as these terms are defined in 40 CFR Part 98, Section 98.230 (October 22, 2015) that are physically located in Colorado.
- VII.A.12. "Northern Weld County" means the portion of the county that does not lie south of a line described as follows: Beginning at a point on Weld County's eastern boundary and Logan County's western boundary intersected by 40 degrees, 42 minutes, 47.1 seconds north latitude, proceed west on 40 degrees, 42 minutes, 47.1 seconds north latitude until this line intersects Weld County's western boundary and Larimer County's eastern boundary.

- VII.A.13. "Oil and natural gas compression segment" means the oil and natural gas compression, midstream pipelines, and other equipment used to collect oil and/or natural gas from gas or oil wells and used to compress, dehydrate, sweeten, or transport the oil and/or natural gas to a natural gas processing facility, a natural gas transmission pipeline, or to a natural gas distribution pipeline. For purposes of Section VII., equipment located at a well production facility, including but not limited to compressors, is excluded from the oil and natural gas compression segment.
- VII.A.14. "Residue gas" and "residue gas compression" mean, respectively, production lease natural gas from which gas liquid products and, in some cases, non-hydrocarbon components have been extracted such that it meets the specifications set by a pipeline transmission company, and/or a distribution company; and the compressors operated by the processing facility, whether inside the processing facility boundary fence or outside the fence-line, that deliver the residue gas from the processing facility to a transmission pipeline.
- VII.B. Beginning January 1, 2022, each midstream segment owner or operator must participate in this Section VII. program to reduce greenhouse gas emissions from midstream fuel combustion equipment by twenty percent (20%) over the 2015 baseline as determined by § 25-7-140(2)(a)(II), C.R.S.
- VII.C. Creation of the Midstream Steering Committee and Initial Information Collection
- VII.C.1. By February 28, 2022, the midstream steering committee members will be approved by the Division. The first midstream steering committee meeting will be held no later than March 31, 2022, and thereafter at least monthly at a time and place determined by the midstream steering committee.
- VII.C.2. By no later than April 30, 2022, the midstream steering committee will initiate an information and data collection process through which it will seek and obtain information in addition to the reports provided pursuant to Section VII.C.3. necessary to inform its technical analyses and policy considerations and comply with its duties under Section VII.
- VII.C.2.a. The midstream steering committee will seek publicly available information concerning most recently filed electric utility Electric Resource Plans and Clean Energy Plans; regarding the forecast timing of upcoming Electric Resource Plan filings, electric utility energy sales and demand forecasts for 2023 through 2030; and regarding existing and contracted electric generation units, and approved future transmission lines in Colorado.
- VII.C.2.b. The Division will provide the midstream steering committee with the 2015 baseline CO₂e emissions from the industrial sector identified in § 25-7-105(1)(e)(XIII), C.R.S. (2021).
- VII.C.3. By no later than July 31, 2022, each midstream segment owner or operator must provide the following information to the midstream steering committee on a Division-approved form to inform the guidance document that will be developed pursuant to Section VII.D.1.
- VII.C.3.a. The facility name, AIRS ID (if applicable), and location (with coordinates) of each of the owner or operator's natural gas processing plants and natural gas compressor stations.

- VII.C.3.b. An inventory of all midstream fuel combustion equipment owned or operated by the midstream segment owner or operator including midstream fuel combustion equipment not located at a natural gas processing plant or natural gas compressor station. The inventory must identify which equipment is located within a disproportionately impacted community. The inventory must include the type of equipment (e.g., engine, boiler) and the total CO₂, methane, and CO₂e emissions from each piece of equipment in calendar years 2020 and 2021 as reported to the Division in accordance with Regulation Number 7, Part B, Section V. If different calculation methods were used to report emissions from midstream fuel combustion equipment to the U.S. EPA under the federal Greenhouse Gas Reporting Program, 40 C.F.R. Part 98, the inventory must include the emissions reported to the U.S. EPA for the equipment included in this inventory and an explanation of the changed method of calculation.
- VII.C.3.c. An estimate of the total annual power demand, along with total instantaneous power demand in kilowatt hours, or horsepower demand required for use of the midstream fuel combustion equipment identified in Section VII.C.3.b.
- VII.C.3.d. An inventory of all electric motors driving gas compressors or electric heaters owned or operated by the midstream segment owner or operator including the facility where located (as applicable) and the date the electric equipment commenced operation.
- VII.C.3.e. An estimate of the total annual kilowatt hours and heat rate demand, along with total instantaneous power demand, being supplied by electric motors and electric heaters identified in Section VII.C.3.d.
- VII.C.3.f. An estimate of existing transmission and distribution capacity to serve estimated load in a specific location as supplied by the applicable electric, transmission, or distribution service provider.

VII.D. Midstream Steering Committee Duties, Guidance, Company ERPs, and Segment ERPs

- VII.D.1. The midstream steering committee will develop and issue one or more guidance documents for midstream segment owners and operators to submit company ERPs to the steering committee. The guidance will
 - VII.D.1.a. Identify the sources that a midstream segment owner or operator must include in its company ERP, including the facilities, activities, and midstream fuel combustion equipment.
 - VII.D.1.b. Identify the total tons of CO₂e reduction to be achieved by the segment ERP, consistent with the requirements of § 25-7-105(1)(e)(XIII), C.R.S. (2021).

- VII.D.1.c. Provide a methodology by which each midstream segment owner or operator will determine the total tons of CO₂e reduction from midstream fuel combustion equipment to be achieved by that owner or operator. The methodology should take into account, without limitation, the emission reductions from midstream fuel combustion equipment achieved by the owner or operator from 2015 midstream fuel combustion equipment emission levels and the amount of emissions reduced by electrification of midstream fuel combustion equipment achieved by the midstream segment owner or operator.
- VII.D.1.d. Prescribe how CO₂e emissions and emission reductions will be calculated in the company ERP, consistent with, to the extent feasible, the requirements of §§ 25-7-105(1)(e) and -140, C.R.S. (2021) and Regulation Number 7, Part B, Section V. The Division must approve of emission calculation methodologies before they can be included in the midstream steering committee guidance document(s).
- VII.D.1.e. To aid midstream owners and operators in ensuring CO₂e emission reductions and co-benefits, identify and describe environmental justice considerations for midstream segment fuel combustion equipment affecting disproportionately impacted communities, including potential air quality impacts or improvements, other non-air environmental benefits or detriments, employment opportunities, and regional economic impacts that must be considered by midstream segment owners or operators in their company ERPs.
- VII.D.1.f. Identify and describe methods by which midstream segment owners or operators can achieve the emission reductions necessary to comply with the requirements of § 25-7-105(1)(e)(XIII), C.R.S. (2021), including, but not limited to, equipment replacement, equipment retrofit, equipment shutdown, or electrification. The guidance should also seek to identify and describe issues that must be addressed by operators considering electrification as an emission reduction strategy
- VII.D.1.g. Describe how midstream segment owners or operators can account for changes in and avoid increases to NO_x or VOC emissions in securing the CO₂e emission reductions necessary to meet the requirements of § 25-7-105(1)(e)(XIII), C.R.S. (2021).
- VII.D.1.h. Describe how midstream segment owners or operators should account for costs associated with achieving required emission reductions from midstream segment fuel combustion equipment in their company ERPs, including capital costs, annualized equipment costs, annual operating costs, and costs in dollars per ton of CO₂e reduced.
- VII.D.1.i. Describe how midstream segment owners or operators should incorporate midstream segment fuel combustion equipment that commences operation after September 30, 2023, into their company ERPs.
- VII.D.2. No later than December 31, 2022, the Division will make the draft midstream steering committee guidance document(s) available for at least 30 days of public comment.

- VII.D.3. By March 31, 2023, the midstream steering committee will publish its final guidance document(s) for the development of company ERPs.
- VII.D.4. By September 30, 2023, each midstream segment owner or operator must submit to the midstream steering committee its company ERP, consistent with and containing all the information identified in the guidance issued by the midstream steering committee, to achieve CO₂e reductions from the owner or operator's midstream segment fuel combustion equipment, prioritizing greenhouse gas emission reductions that have co-benefits. The Division will develop emission reduction requirements for an owner or operator that fails to submit a company ERP.
- VII.D.5. By March 31, 2024, the midstream steering committee will develop a midstream segment ERP, and provide the proposed midstream segment ERP to the Division for review. The proposed midstream segment ERP will
- VII.D.5.a. Identify the total tons of CO₂e reduction from midstream segment fuel combustion equipment to be achieved by the midstream segment ERP, consistent with the requirements of § 25-7-105(1)(e)(XIII), C.R.S. (2021).
 - VII.D.5.b. Identify the total tons of CO₂e reduction from midstream segment fuel combustion equipment to be achieved by each midstream segment owner or operator, consistent with the requirements of § 25-7-105(1)(e)(XIII), C.R.S. (2021).
 - VII.D.5.c. Identify the midstream segment facilities and fuel combustion equipment addressed by the midstream segment ERP.
 - VII.D.5.d. Prescribe the process and timing for midstream segment owners or operators to implement CO₂e emission reduction strategies for midstream fuel combustion equipment, including, but not limited to, electrification, retrofit, shut-down, or replacement.
 - VII.D.5.e. Describe how the implementation of the midstream segment ERP will affect disproportionately impacted communities within which midstream fuel combustion equipment is located, including a description of the percentage of CO₂e emission reductions in disproportionately impacted communities that will be achieved by the midstream segment ERP as a percentage of total emission reductions to be achieved by the midstream segment ERP. The midstream segment ERP must ensure and prioritize CO₂e reductions with co-benefits in disproportionately impacted communities, identify the disproportionately impacted communities in which the co-benefits will be achieved, and must attempt to quantify the co-benefits associated with the midstream segment ERP.
 - VII.D.5.f. Prescribe how emission reductions will be achieved for midstream segment fuel combustion equipment that is modified, constructed, or relocated to Colorado on or after September 30, 2023.
 - VII.D.5.g. Prescribe any additional recordkeeping and reporting requirements over and above existing provisions of Regulation Number 7, sufficient to ensure enforceability and verification of the midstream segment ERP.

VII.D.5.h. To the extent feasible, the midstream segment ERP will report the total estimated cost to midstream segment owners and operators to achieve the CO₂e reductions in the midstream segment ERP and the impact on CO₂e emissions from electrical generating units in Colorado resulting from electrification of midstream fuel combustion equipment as set forth in the midstream segment ERP.

VII.D.6. Following receipt of the midstream segment ERP from the midstream steering committee, the Division will make the draft midstream segment ERP available for at least 30 days of public comment.

VII.D.7. By no later than August 31, 2024, the Division will submit a regulatory proposal based upon the midstream segment ERP to the Air Quality Control Commission and request a rulemaking hearing for no later than December 31, 2024.

VII.E. Recordkeeping and Reporting. This Section VII.E will be repealed upon adoption by the Air Quality Control Commission of regulations addressing midstream fuel combustion equipment to meet the requirements of § 25-7-105(1)(e)(XIII), C.R.S. (2021).

VII.E.1. Midstream segment owners or operators must retain records of information submitted to the Division or midstream steering committee, including information supporting the company ERP, for three (3) years and make them available for inspection by the Division upon request.

VII.E.2. Midstream segment owners or operators must retain records of actions taken after January 1, 2022, to reduce CO₂e emissions from their midstream fuel combustion equipment.

VII.E.3. The Division will provide an update on the development of this program and initial implementation efforts to the Air Quality Control Commission during a scheduled Air Quality Control Commission meeting in or after July 2023.

VIII. (State Only) Greenhouse Gas Intensity Program for Oil and Natural Gas Upstream Segment

VIII.A. Definitions

VIII.A.1. “Calendar year” means January 1 up through and including December 31 of the year.

VIII.A.2. “Certified third-party auditor” means a person tasked with performing an environmental audit of an operator’s Oil and Natural Gas Annual Emission Inventory Reports (ONGAEIR). The certified third-party auditor must have expertise in the area of emission calculation methodologies. The certified third-party auditor must be qualified to perform such audits, as determined by the Division. The certified third-party auditor must not have supervised or been responsible for the ONGAEIR calculations, permitting, or compliance support for that operator being audited.

VIII.A.3. “Co-benefits” for this Section VIII. means the reduction of harmful air pollutants in disproportionately impacted communities.

- VIII.A.4. "Commencement of operation" means when a source first conducts the activity that it was designed and permitted for. In addition, for oil and gas well production facilities, commencement of operation is the date any permanent production equipment is in use and product is consistently flowing to sales lines, gathering lines, or storage tanks from the first producing well at the stationary source, but no later than end of well completion operations (including flowback).
- VIII.A.5. "Controlling interest" for this Section VIII. means an interest that provides a person, either directly or indirectly, the power to direct or cause the direction of the management and policies of another person, whether through ownership or voting securities, by contract, or otherwise.
- VIII.A.6. "Direct measurement" means regional, local, stationary source, or air pollution source monitoring of methane emissions used to quantify emissions of greenhouse gasses.
- VIII.A.7. "Disproportionately impacted community" (DI community) means census block groups designated as DI communities in CDPHE's draft Data Viewer for Disproportionately Impacted Communities in Colorado (as of December 17, 2021, at: https://cohealthviz.dphe.state.co.us/t/EnvironmentalEpidemiologyPublic/views/EJActDICommunities-Public/HB21-1266DICommunities?%3AshowAppBanner=false&%3Adisplay_count=n&%3AshowVizHome=n&%3Aorigin=viz_share_link&%3AisGuestRedirectFromVizportal=y&%3Aembed=y) consistent with 24-4-109(2)(b)(II), C.R.S. (2021). A complete list of these census block groups by 12-digit FIPS code will be maintained by the Division and made publicly available.
- VIII.A.8. "Drill-out" means the process of removing the plugs placed during hydraulic fracturing or refracturing. Drill-out ends after the removal of all stage plugs and the initial wellbore clean-up.
- VIII.A.9. "Drilling" or "drilled" means the process to bore a hole to create a well for oil and/or natural gas production.
- VIII.A.10. "Flowback" means the process of allowing fluids and entrained solids to flow from a well following stimulation, either in preparation for a subsequent phase of treatment or in preparation for cleanup and placing the well into production. The term flowback also means the fluids and entrained solids flowing from a well after drilling or hydraulic fracturing or refracturing. Flowback ends when all temporary flowback equipment is removed from service. Flowback does not include drill-out.
- VIII.A.11. "Greenhouse gas intensity" means the sum of preproduction emissions and production emissions in a calendar year in mtCO₂e divided by the kBOE for that calendar year, calculated pursuant to Sections VIII.D. and VIII.F.
- VIII.A.12. "Harmful air pollutants" for purposes of Section VIII. means pollutants designated by EPA as criteria pollutants (carbon monoxide, lead, nitrogen dioxide, ozone, particulate pollution (PM) (PM_{2.5} and PM₁₀) and sulfur dioxide) or hazardous air pollutants.

- VIII.A.13. "Hydraulic fracturing" means the process of directing pressurized fluids containing any combination of water, proppant, and any added chemicals to penetrate tight formations, such as shale, coal, and tight sand formations, that subsequently require flowback to expel fracture fluids and solids.
- VIII.A.14. "Hydraulic refracturing" means conducting a subsequent hydraulic fracturing operation at a well that has previously undergone a hydraulic fracturing operation.
- VIII.A.15. "Intensity operator" means a person or entity that operates upstream segment activities or equipment. For purposes of Section VIII., where a person or entity holds a controlling interest in more than one intensity operator, that person or entity is the intensity operator of all upstream segment activities and equipment in which that person or entity has a controlling interest.
- VIII.A.16. "kBOE" means production of hydrocarbon liquids and natural gas, measured in thousands of barrels of oil equivalent.
- VIII.A.17. "mtCO₂e" means metric tons (mt) of carbon dioxide equivalent, using global warming potential values from the IPCC Fifth Assessment Report, 2014 (AR5).
- VIII.A.18. "Majority operator" means (1) an intensity operator with company-wide production in Colorado in calendar year 2022 of greater than or equal to 10,000 kBOE; (2) a new to market operator whose first transaction(s) in Colorado is to purchase the assets of a majority operator; (3) a new to market operator for which the total level of production from all assets acquired or developed in that calendar year exceeds 10,000 kBOE; (4) a new to market operator who has not purchased assets from a majority or minority operator and who commences operation of a well production facility after January 1, 2023; and (5) a minority operator that becomes a majority operator pursuant to Section VIII.B.6.
- VIII.A.19. "Measurement-informed inventory" means the greenhouse gas emissions inventory from the Oil and Natural Gas Annual Emission Inventory Reports (ONGAEIR) informed by direct measurement and, optionally, parametric measurement.
- VII.A.20. "Measurement strategy" means the strategy that describes how an intensity operator uses direct measurement and, optionally, parametric measurement to inform reported greenhouse gas emissions in ONGAEIR.
- VIII.A.21. "Midstream segment" means the oil and natural gas compression segment and the natural gas processing segment that are physically located in Colorado and that are upstream of the natural gas transmission and storage segment.
- VIII.A.22. "Minority operator" means an intensity operator with company-wide production of hydrocarbon liquids and natural gas in Colorado in calendar year 2022 of less than 10,000 kBOE. Minority operator also means a new to market operator whose first transaction(s) in Colorado is to purchase the assets of a minority operator, as long as the total level of production from all assets acquired or developed by (in the case of new well production facilities) of the new to market operator in that calendar year does not exceed 10,000 kBOE.

- VIII.A.23. "New to market operator" means an owner or operator that did not produce any oil or natural gas in Colorado in calendar years 2021 or 2022 or own or operate any well production facility in Colorado as of December 31, 2022. A new to market operator that becomes a majority operator as defined in Section VIII.A.16. or a minority operator as defined in Section VIII.A.18. is no longer a new to market operator.
- VIII.A.24. "Oil and Natural Gas Annual Emission Inventory Reports (ONGAEIR)" means the annual emissions inventory reports required in Regulation Number 7, Part B, Sections II.G.3 and V for oil and gas segment emissions.
- VIII.A.25. "Parametric Measurement" means regional, local, stationary source, or air pollution source monitoring of pressure, temperature, flow rate, control efficiency, or other operational characteristics used to inform quantification of greenhouse gas emissions.
- VIII.A.26. "Preproduction emissions" means the greenhouse gas emitted from an oil or natural gas well and associated equipment and activities during the construction and operation of the oil or natural gas well until the well commences operation, including from the drilling through the hydrocarbon bearing zones, hydraulic fracturing or refracturing, drill-out, and flowback of the oil and/or natural gas well.
- VIII.A.27. "Production emissions" means the greenhouse gas emitted from an oil or natural gas well and associated equipment and activities after the well commences operation.
- VIII.A.28. "State default intensity verification factor" means the methane factor developed to account for the difference (if any) in monitored methane emissions and reported methane emissions and used in the calculation of greenhouse gas intensity.
- VIII.A.29. "Upstream segment" means oil and natural gas exploration and production operations physically located in Colorado upstream of the midstream segment.
- VIII.A.30. "Well production facility" means all equipment at a single stationary source directly associated with one or more oil wells or natural gas wells upstream of the natural gas processing plant. This equipment includes, but is not limited to, equipment used for storage, separation, treating, dehydration, artificial lift, combustion, compression, pumping, metering, monitoring, and flowline.
- VIII.B. Greenhouse gas intensity targets for the upstream segment.
- VIII.B.1. Beginning January 1, 2023, intensity operators must participate in this greenhouse gas intensity program to reduce preproduction and production emissions in Colorado. An intensity operator that fails to achieve any of the applicable targets in Section VIII.B. must achieve additional reductions in preproduction and/or production emissions in the subsequent calendar year to address the difference between the intensity operator's reported greenhouse gas intensity for that calendar year and the applicable target.
- VIII.B.2. For calendar year 2025, intensity operators subject to Section VIII.B.1. must achieve the following greenhouse gas intensity targets for preproduction and production emissions.
- VIII.B.2.a. Majority Operator: 10.94 mtCO₂e/kBOE.

- VIII.B.2.b. Minority Operator: 34.39 mtCO₂e/kBOE.
- VIII.B.3. For calendar year 2027, intensity operators subject to Section VIII.B.1. must achieve the following greenhouse gas intensity targets for preproduction and production emissions.
 - VIII.B.3.a. Majority Operator: 8.46 mtCO₂e/kBOE.
 - VIII.B.3.b. Minority Operator: 26.60 mtCO₂e/kBOE.
- VIII.B.4. For calendar year 2030, intensity operators subject to Section VIII.B.1. must achieve the following greenhouse gas intensity targets for preproduction and production emissions.
 - VIII.B.4.a. Majority Operator: 6.80 mtCO₂e/kBOE.
 - VIII.B.4.b. Minority Operator: 21.38 mtCO₂e/kBOE.
- VIII.B.5. In calendar years 2026, 2028, and 2029, intensity operators subject to Section VIII.B.1. must achieve a greenhouse gas intensity less than or equal to the applicable preceding year target in Sections VIII.B.2. and VIII.B.3. (e.g., for calendar year 2026 achieve at least the target for calendar year 2025).
- VIII.B.6. If, in any calendar year beginning 2023, a minority operator
 - VIII.B.6.a. Has production of greater than or equal to 10,000 kBOE or
 - VIII.B.6.b. Has production that represents an increase over production in the prior calendar year by greater than or equal to 2,500 kBOE (e.g., if production is 2,500 kBOE higher in 2023 than it was in 2022), then
 - VIII.B.6.c. Beginning the calendar year after the applicable circumstances under Sections VIII.B.6.a. or VIII.B.6.b., unless otherwise approved by the Division, the minority operator becomes a majority operator and must comply with the applicable majority operator greenhouse gas intensity targets for all its upstream segment operations for that year and all remaining years through 2030.
- VIII.B.7. Acquisitions. Except as provided, if an owner or operator acquires or takes over operation of an oil or natural gas well in Colorado after January 1, 2025, that owner or operator must meet the greenhouse gas intensity targets in Sections VIII.B.2. through VIII.B.5. applicable to the intensity operator acquiring the assets.
 - VIII.B.7.a. If a majority operator merges with, acquires, or takes over operation of an oil or natural gas well in Colorado from a minority operator on or after January 1, 2025, the majority operator (or surviving entity) must at least comply with the applicable minority operator greenhouse gas intensity target for the preproduction and production emissions from the acquired well(s) for the calendar year of the acquisition. Beginning with the calendar year after the acquisition, the applicable majority owner or operator must comply with the applicable majority operator greenhouse gas intensity targets for the preproduction and production emissions from all its upstream segment operations, including the acquired well(s).

- VIII.B.7.b. If a minority operator acquires or takes over operation of an oil or natural gas well in Colorado from a majority operator on or after January 1, 2025, the minority operator must at least comply with the applicable minority operator greenhouse gas intensity target for the preproduction and production emissions from the acquired well(s) for the calendar years of and after the acquisition, after which the minority operator greenhouse gas intensity targets apply to all assets of the minority operator, including the acquired assets (unless the minority operator has become a majority operator).

VIII.C. New facility intensity targets.

- VIII.C.1. Beginning January 1, 2023, intensity operators of well production facilities that commence operation after December 31, 2022, must also meet the new facility intensity target(s) for those facilities as set forth in Sections VIII.C.2. through VIII.C.4. in the calendar year of and the calendar year after the well production facility commences operation. These targets are in addition to the targets applicable to all of the intensity operator's upstream segment operations as specified in Section VIII.B.

- VIII.C.1.a. For purposes of Section VIII.C., "new facility intensity" means the production emissions in CO₂e from all well production facilities commencing operation in a calendar year divided by the production of hydrocarbon liquid and natural gas from those facilities in kBOE for that calendar year.

- VIII.C.2. For calendar years 2023 through 2025, the new facility intensity target is 8.59 mtCO₂e/kBOE, unless the well production facility is located in the 8-hour Ozone Control Area and in a disproportionately impacted community, then the new facility intensity target is 7.7 mtCO₂e/kBOE.

- VIII.C.3. For calendar years 2026 through 2027, the new facility intensity target is 6.64 mtCO₂e/kBOE, unless the well production facility is located in the 8-hour Ozone Control Area and in a disproportionately impacted community, then the new facility intensity target is 6.0 mtCO₂e/kBOE.

- VIII.C.4. For calendar years 2028 through 2030, the new facility intensity target is 5.34 mtCO₂e/kBOE, unless the well production facility is located in the 8-hour Ozone Control Area and in a disproportionately impacted community, then the new facility intensity target is 4.8 mtCO₂e/kBOE.

VIII.D. Accounting for production kBOE, preproduction emissions, and production emissions.

- VIII.D.1. Production can only be allocated to one intensity operator for the same time period. Intensity operators must account for production from all oil or natural gas wells and well production facilities in which the intensity operator holds the controlling interest. Intensity operators must account for production during the time in which the intensity operator holds that controlling interest.

- VIII.D.2. Intensity operators must calculate kBOE by adding the production of hydrocarbon liquids in thousand barrels to the proportion of natural gas (calculated by dividing the million standard cubic feet (MMscf) volume of natural gas produced by the conversion rate of 5.8 MMscf/kBOE).

- VIII.D.3. The intensity operator that reports the preproduction emissions and production emissions for upstream segment activities and equipment must report the kBOE associated with those activities and equipment.

VIII.E. Intensity operator greenhouse gas intensity plans.

- VIII.E.1. Greenhouse gas intensity plans must be submitted on a Division-approved format and must contain, at a minimum

- VIII.E.1.a. An identification of all the intensity operator's well production facilities, including facility name; facility AIRS ID, or facility location if the facility does not have an AIRS ID; entity listed as the operator for all well production facilities covered by the greenhouse gas intensity plan for which production is included as specified under Section VIII.D.1.; and an identification of which facilities are located within a disproportionately impacted community.
- VIII.E.1.b. The intensity operator's greenhouse gas intensity company-wide and per well production facility for the preceding calendar year, including intensity calculation methodology in accordance with Section VIII.F2.
- VIII.E.1.c. A list and description of the best management practices (BMPs), control methods, emission reduction strategies, and technologies the intensity operator intends to use to meet the applicable targets in Section IV.B.2. on a site-specific basis.
- VIII.E.1.d. An estimate of the greenhouse gas emission reductions that each type of BMP, control method, emission reduction strategy, or technology is expected to achieve on a company-wide mass basis and on a company-wide greenhouse gas intensity basis, including calculation methods.
- VIII.E.1.e. A description of which BMPs, control methods, emission reduction strategies, and technologies will be deployed in disproportionately impacted communities, and a demonstration that intensity operators will prioritize co-benefits.

VIII.E.2. Greenhouse gas intensity plan submittal deadlines.

- VIII.E.2.a. By August 31, 2023, each intensity operator subject to Section VIII.B.1. must submit to the Division a proposed greenhouse gas intensity plan demonstrating how the intensity operator intends to meet the applicable greenhouse gas intensity targets in Section VIII.B.2.
- VIII.E.2.b. By June 30, 2026, each intensity operator subject to Section VIII.B.1. must submit to the Division a greenhouse gas intensity plan demonstrating how the intensity operator will meet the applicable greenhouse gas intensity targets in Section VIII.B.3.
- VIII.E.2.c. By June 30, 2028, each intensity operator subject to Section VIII.B.1. must submit to the Division a greenhouse gas intensity plan demonstrating how the intensity operator will meet the applicable greenhouse gas intensity targets in Section VIII.B.4.

VIII.E.3. Asset transfer updates.

- VIII.E.3.a. Section VIII.E.3. applies whenever ownership or operation of an oil or natural gas well or well production facility is transferred after August 31, 2024. The operator taking over operation of the oil or natural gas well or well production facility is referred to herein as the “acquiring operator”. The intensity operator from whom ownership or operation is transferred is referred to as the “selling operator.”
- VIII.E.3.b. If the transaction involves any well production facility for which the selling operator's greenhouse gas intensity plan submitted under Section VIII.E.2. provides for implementation of any BMP, control method, emission reduction strategy, or technology, then within thirty (30) days of closing of the transaction.
- VIII.E.3.b.(i) The selling operator must submit an update to its greenhouse gas intensity plan that:
- VIII.E.3.b.(i)(A) Identifies each well production facility transferred (name and AIRS ID, if applicable), the name of the acquiring operator, and the date of closing of the transaction.
- VIII.E.3.b.(i)(B) Includes a quantification of the emission reductions that would have been achieved at each well production facility involved in the transaction under the greenhouse gas intensity plan consistent with the calculation methods used in Section VIII.E.1.d.
- VIII.E.3.b.(i)(C) Includes a demonstration that the selling operator will still meet its greenhouse gas intensity targets and identifies any additional BMPs, control method, emission reduction strategy, and technologies consistent with Section VIII.E.1.
- VIII.E.3.b.(ii) The acquiring operator must submit an update to its greenhouse gas intensity plan (or, in the event the acquiring operator is also a new to market operator, the acquiring operator must submit a new greenhouse gas intensity plan) that, for each well production facility involved in the transaction
- VIII.E.3.b.(ii)(A) Identifies the well production facility transferred (name and AIRS ID, if applicable), the name of the selling operator, and the date of closing of the transaction.
- VIII.E.3.b.(ii)(B) Commits to implementing the same BMP, control method, emission reduction strategy, and technology provided for in the selling operator's plan on the same schedule; or

VIII.E.3.b.(ii)(C) Quantifies the emission reductions that would have been achieved under the selling operator's greenhouse gas intensity plan consistent with the calculation methods used in Section VIII.E.1.d. and identifies how the acquiring operator will achieve equal or greater emission reductions at the same or other well production facilities involved in the transaction (or, if approved by the Division, at other of the acquiring operator's well production facilities) on the same schedule.

VIII.F. Verification through achievement of a measurement-informed inventory.

VIII.F.1. [Repealed as on July 21, 2023]

VIII.F.2. Applicability

VIII.F.2.a. Intensity operators must comply with Section VIII.F.3. to calculate greenhouse gas intensity and new facility intensity for:

VIII.F.2.a.(i) Greenhouse Gas Intensity Plans submitted pursuant to Section VIII.E.2.b and VIII.E.2.c; and

VIII.F.2.a.(ii) Annual reports as required in VIII.G. submitted in 2026 through 2031.

VIII.F.2.b. The requirements of Section VIII.F.2.a do not apply to calculations of new facility greenhouse gas intensity pursuant to Section VIII.C for 2023 and 2024 as reported in annual reports as required in VIII.G. submitted in 2024 and 2025.

VIII.F.3. Greenhouse Gas Intensity Verification Calculation Methodology to Demonstrate Compliance with the Greenhouse Gas Intensity Targets in Sections VIII.B and VIII.C.

Intensity operators must comply with either Section VIII.F.3.a or Section VIII.F.3.b to develop a measurement-informed inventory used to demonstrate compliance with the intensity operator's required greenhouse gas intensity.

VIII.F.3.a. State Default Intensity Verification Factor

Starting in 2024, by December 31 of each year through 2029, the Division will publish one or more state default intensity verification factors valid for the following calendar year. Intensity operators must apply a state default intensity verification factor to their ONGAEIR methane emissions, as outlined by the Division, unless the operator elects to use an operator-specific program pursuant to Section VIII.F.3.b.

VIII.F.3.b. Operator-Specific Programs

As an alternative to the state default intensity verification factor outlined in Section VIII.F.3.a., operators may utilize an operator-specific program. The operator-specific program must include:

VIII.F.3.b.(i) A measurement strategy.

VIII.F.3.b.(i)(A) For calendar years 2025 and 2026, intensity operators must use a measurement strategy developed by the Division. Starting in calendar year 2027, operators may use a measurement strategy developed by either the Division or the intensity operator.

VIII.F.3.b.(i)(A)(1) The Division will develop, in accordance with VIII.F.4., a list of approved measurement strategies that are sufficient to achieve a robust measurement-informed inventory, which will be published in the Intensity Verification Protocol.

VIII.F.3.b.(i)(A)(2) Intensity operators may develop their own measurement strategy for use beginning in calendar year 2027. Intensity operators must submit their measurement strategy to the Division for review and approval by March 31 of the year prior to which the intensity operator intends to implement the measurement strategy. The Division must review operator-developed measurement strategies, and within 90 days, may either approve the strategy, require revisions to the strategy, or deny the strategy. If the Division denies approval of the measurement strategy, the intensity operator may either use the state default intensity verification factor or a Division-developed measurement strategy.

VIII.F.3.b.(i)(B) The measurement strategy must define how direct measurement and, where it is used, parametric measurement informs reporting of emissions, considering: the appropriateness of the selected measurement technology or methodology, including the minimum detection limit; representativeness of monitoring sites; emission rates and probability of detection of the monitoring technology; variability of emissions over time; and other reasonable and necessary monitoring considerations as determined by the Division.

VIII.F.3.b.(i)(C) The measurement strategy must include direct measurements at the site-level.

VIII.F.3.b.(i)(D) The direct measurement technology(ies) used across the intensity operator's assets must be fit for purpose, capture a sufficient portion of expected emissions, and be validated with appropriate testing.

- VIII.F.3.b.(i)(E) The measurement strategy must include an operation and maintenance plan in accordance with the manufacturer recommendations for monitoring technology or as developed by the operator to ensure the accuracy of the measurement strategy.
- VIII.F.3.b.(i)(F) Measurement strategies must be reviewed annually and updated as necessary to demonstrate compliance with Section VIII.F.3.b.(i).
- VIII.F.3.b.(ii) An audit of the measurement-informed inventory for calendar years 2025, 2027, and 2030. No later than December 31 of the following calendar year, a certified third party auditor will provide a summarized report of their findings and recommendations as relates to the reporting of greenhouse gas emissions. The audit must include review of:
 - VIII.F.3.b.(ii)(A) Greenhouse gas emission calculations reported in ONGAEIR,
 - VIII.F.3.b.(ii)(B) Monitoring records collected under the measurement strategy required in VIII.F.3.b.(i),
 - VIII.F.3.b.(ii)(C) Records maintained in support of monitoring, testing, and reporting requirements of Regulation Number 7 that affect the operator's ONGAEIR.
- VIII.F.3.b.(iii) The Division may review operator-specific programs, and may either require revisions to the program or deny the program and require an operator to use the state default intensity verification factor.

VIII.F.4. Intensity Verification Protocol

The Division will create and maintain a protocol for intensity verification with the information contained in these Sections VIII.F. and VIII.G. The Division will review the protocol annually, and identify needed revisions. Any revisions must be published by June 30 of the calendar year preceding the verification year. Upon any revisions to the protocol beyond those that are administrative in nature, the Division must provide an opportunity for public participation. This includes:

- VIII.F.4.a. A minimum of a 30-day public comment period.
- VIII.F.4.b. A minimum of 2 public meetings for presentation of revisions and/or to accept public feedback.

VIII.F.5. Recordkeeping

- VIII.F.5.a. Where Section VIII.F.3.b. applies, owners or operators must maintain records, including the measurement strategy and any subsequent updates and make them available to the Division upon request. In addition, for a period of five years, owners or operators must maintain the following records, or contract for access to such records as applicable, and make them available to the Division upon request:

- VIII.F.5.a.(i) Records created by the measurement strategy, including the data associated with each monitoring technology and/or the monitoring report from the monitoring contractor.
- VIII.F.5.a.(ii) Records of calibration of any equipment used in the measurement strategy, including the date(s) of the calibration.
- VIII.F.5.a.(iii) Records of maintenance of any equipment used in the measurement strategy, including the date(s) and a description of the corrective actions.

VIII.F.5.b. Where Section VIII.F.3.b. applies, owners or operators must maintain the following records for a minimum of 5 years. Records must be made available to the Division upon request.

- VIII.F.5.b.(i) Records of the complete submission to the certified third-party auditor.
- VIII.F.5.b.(ii) Records of reports created by certified third-party auditors.
- VIII.F.5.b.(iii) Records of actions taken in response to third-party audit.

VII.G. Reporting

VIII.G.1. Summary of measurement strategy

By September 30 of 2024 through 2029 for the next calendar year, intensity operators must notify the Division if the intensity operator intends to utilize an operator-specific program in Section VIII.F.3.b., and if so, submit to the Division a summary of the measurement strategy including all information identified by the Division in the Intensity Verification Protocol. Operators that submitted a notification of their intent to use an operator-specific program may revert back to using the state-default intensity verification factor(s) or a Division-developed measurement strategy for a given year, with Division approval, after a showing of good cause.

VIII.G.2. Annual verifications

By June 30 of 2024 through 2031 for the previous calendar year, intensity operators must submit annual verifications on a Division-approved form in accordance with Section VIII.F.2. to the Division summarizing the intensity operator's greenhouse gas intensity plan implementation during the preceding calendar year. For the annual verifications due in 2024 and 2025, the items in Sections VIII.G.2.a. through VIII.G.2.j. are required only as they are applicable to new facility intensity for calendar years 2023 and 2024. The annual verification must include, at a minimum:

- VIII.G.2.a. The intensity operator's implementation of the types of BMPs, control measures, emission reduction strategies, and technologies in its greenhouse gas intensity plan, on a site-specific basis (by location name and AIRS ID, if applicable, and whether the site is located within a disproportionately impacted community) for each BMP, control method, emission reduction strategy, and technology implemented.
- VIII.G.2.b. If applicable, an identification of new well production facilities subject to Section VIII.C. commencing operation in that calendar year.

- VIII.G.2.c. If applicable, the intensity operator's implementation of BMPs, control measures, emission reduction strategies, and technologies to achieve the new facility intensity target at all sites subject to Section VIII.C. on a site-specific basis (by location name and AIRS ID, if applicable).
- VIII.G.2.d. Instances of departure from the intensity operator's greenhouse gas intensity plan, reason(s) for departure, and any modifications of the applicable element(s) of the BMP plan.
- VIII.G.2.e. Use of any alternative emission reduction approaches not specified in the intensity operator's greenhouse gas intensity plan.
- VIII.G.2.f. A demonstration that emission reductions were prioritized in disproportionately impacted communities, including a quantification of co-benefits achieved.
- VIII.G.2.g. Identification by location name, AIRS ID (if applicable), well API number, and COGCC location ID (if applicable) of any oil or natural gas wells acquired or divested during the previous calendar year; the date of acquisition or divestment; and the name of the operator from which the well(s) were acquired or to whom the well(s) were divested.
- VIII.G.2.h. A certification by a company representative with oversight over the operator's greenhouse gas intensity program that the annual verification is accurate and complete, to the best of the representative's knowledge and, if applicable, that measures identified in an asset transfer update submitted under Section IV.E.3. have been implemented as described therein.
- VIII.G.2.i. The annual company-wide and new facility greenhouse gas intensity.
- VIII.G.2.j. If applicable, whether the operator utilized the state default intensity verification factor in Section VIII.F.3.a. or an operator-specific program in Section VIII.F.3.b.

VIII.G.3. Updated Greenhouse Gas Intensity Plan

By June 30, 2026 through 2031, if an intensity operator does not meet the required intensity target for the previous calendar year, the intensity operator must update their most recently submitted greenhouse intensity plan to demonstrate how the operator intends to meet its required intensity target and meet the additional reductions required by Section VIII.B.1. and submit that updated greenhouse gas intensity plan to the Division.

VIII.G.4. Operator-Specific Program Measurement Strategy

By June 30 of 2026 through 2031 for the preceding calendar year, where an intensity operator utilized an operator-specific GHG intensity verification program as allowed in Section VIII.F.3.b., the intensity operator must submit to the Division the following:

- VIII.G.4.a. The measurement strategy including all information identified by the Division in the Intensity Verification Protocol.

- VIII.G.4.b. An evaluation of the implementation of the measurement strategy, including all information identified by the Division in the Intensity Verification Protocol.

VIII.G.5. Operator-Specific Program Third-Party Audit Reports

Where the intensity operator utilized an operator-specific GHG intensity verification program as allowed in Section VIII.F.3.b., the intensity operator must submit to the Division a summarized report with a list of any findings of the certified third-party auditor that may indicate the ONGAEIR needs to be adjusted, along with any revisions the operator is making to address those findings. The report must also include the credentials and certification of the third-party auditor. The report is due by the following dates:

- VIII.G.5.a. By December 31, 2026, for calendar year 2025,
VIII.G.5.b. By December 31, 2028, for calendar year 2027, and
VIII.G.5.c. By December 31, 2031, for calendar year 2030.

PART C Statements of Basis, Specific Statutory Authority and Purpose

A. December 21, 1995 (Section II.B.)

This Statement of Basis, Specific Statutory Authority and Purpose complies with the requirements of the Colorado Administrative Procedures Act, § 24-4-103, C.R.S. and the Colorado Air Pollution Prevention and Control Act, § 25-7-110.5, C.R.S.

Basis

Regulation Numbers 3, 7 and the Common Provisions establish lists of Negligibly Reactive Volatile Organic Compounds (NRVOCs). The revisions adopted consolidate the list of NRVOCs into the Common Provisions, assuring that the same list of NRVOCs apply to all the Colorado regulations. This provides more consistency in those chemicals regulated as VOCs.

Specific Statutory Authority

The Colorado Air Pollution Prevention and Control Act provides the authority for the Colorado Air Quality Control Commission to adopt and modify regulations pertaining to organic solvents and photochemical substances. § 25-7-109(2)(f) and 25-7-109(2)(g), C.R.S., grant the Commission the authority to promulgate regulations pertaining to Organic solvents and photochemical substances. The Commission's action is taken pursuant to authority granted and procedures set forth in §§ 25-7-105, 25-7-109, and 25-7-110, C.R.S.

Purpose

These revisions to Regulations Numbers 3, 7, and the Common Provision are intended to clarify substances that are negligibly reactive VOCs, which are reflected in the EPA list of non-photochemically reactive VOCs. By consolidating the list (which consists of the EPA list of non-photochemically VOCs), and adopting the EPA definition by reference, a single list of negligibly reactive VOCs will apply uniformly to all Colorado Air Quality Control Commission regulations.

This revision will also include EPA's recent addition of acetone to the negligibly reactive VOC list. The addition of acetone to the list of negligibly reactive VOC's provides additional flexibility to sources looking for an alternative to more photochemically reactive VOCs. Because the EPA has added acetone to their list of non-photochemically reactive VOCs many industries, which make and supply products to Colorado industries, are planning to substitute acetone for more reactive VOCs. This change in the content of products purchased by industry for use in Colorado would adversely affect industries in Colorado if acetone remains a regulated VOC in Colorado. By adopting acetone as a negligibly-reactive VOC, industry's will be able to take advantage of and benefit from this possible shift in product contents.

B. March 21, 1996 (Sections I.A.1. through I.A.4.; II.D.; II.E.)

The changes to Regulation Number 7 were adopted as part of the Commission's decision to redesignate the Denver metro area as an attainment and maintenance area for ozone, together with the relevant amendments to the Ambient Air Quality Standards regulation and Regulation Number 3. The Ozone Maintenance Plan, also adopted by the Commission on March 21, 1996 as part of the redesignation, based part of its demonstration of maintenance on the continued existence of rules regulating VOC emissions. Such rules include the application of the permit requirements of Regulation Number 3 to gasoline stations, and the continued application of Regulation Number 7 for the control of VOC in nonattainment areas. The VOC controls in Regulation Number 7 were adopted into the SIP in May 1995, after Denver attained the ozone standard. The maintenance demonstration was based on future inventories that assumed the continuance of existing VOC controls in the Denver Metro area.

Pursuant to § 25-7-107(2.5), C.R.S., the Commission is required to take expeditious action to redesignate the area as an attainment area for ozone. The CAA requires the submittal of a maintenance plan demonstrating maintenance of the ozone standard for any such redesignation request. The changes to Regulation Number 7 are consistent with continued maintenance of the ozone standard and are not otherwise more stringent than the relevant federal requirements.

The purpose of the revisions to Regulation Number 7, Section I.A is to provide a de minimis source with an opportunity to obtain an exemption from the requirements of Regulation Number 7 through rule-making. This revision will be submitted to the EPA for inclusion in the State Implementation Plan (SIP). Upon inclusion of this revision in the SIP, exemptions from Regulation Number 7 adopted by the Commission shall apply for purposes of both federal and state law, pending review by the state legislature pursuant to § 25-7-133(2), C.R.S. The rule revision includes several limitations on the scope of such exemptions:

1. The aggregate of all emissions from de minimis sources may not exceed five tons of emissions per day. The purpose of this limitation is to protect the projections contained in the emissions inventory, and to prevent growth in such emissions from exceeding the National Ambient Air Quality Standard (NAAQS) for ozone.
2. An exemption may not be granted if the Division demonstrates that such exemption will cause or contribute to air pollution levels that exceed the NAAQS, even if the total aggregate emissions from such sources is less than five tons per day.
3. The Commission rule prohibits more than one rulemaking hearing per year to consider potential de minimis exemptions in the aggregate. The purpose of this provision is to prevent the granting of case-by-case exemptions, and to conserve agency resources. The granting of exemptions on a case-by-case basis would grant an unfair advantage for those sources that are able to have their case heard by the Commission before other, similarly situated sources, submit a request for a de minimis exemption. However, upon a showing of an emergency, and at the discretion of the Commission, the Commission may always grant an exemption on a case-by-case basis.

4. The Commission rule provides that the growth in emissions due to such de minimis exemptions may not exceed the growth that was included in the emissions inventory in the SIP.
5. The Commission rule requires the de minimis exemptions to be included in a permit that is subject to review and comment by the public and by EPA.

The rule revision proposed by the Regional Air Quality Council (RAQC) did not include these limitations. However, the Commission may not have used the rule as proposed by RAQC to grant unlimited exemptions from the requirements of Regulation Number 7 because such an action would undermine the regulation and the maintenance demonstration contained in the SIP. The limitations adopted by the Commission were the subject of an alternative proposal submitted by the Division. The purpose of the limit is to ensure that the de minimis exemption provision cannot be used to jeopardize attainment of the NAAQs. Such a limit is necessary in order to obtain EPA approval of this SIP revision. The alternative proposal submitted by the Division and adopted by the Commission will have no regulatory impact on any person, facility, or activity. Even without an express provision limiting the de minimis exemptions to five tons per day, the Commission generally would not have granted de minimis exemptions in excess of that amount because such emissions are not accounted for in the emissions inventory and would undermine the maintenance demonstration. Furthermore, the alternative proposed by the Division does not, by itself, create an exemption from any regulatory requirement. The alternative simply limits the scope of the exemptions that may become fully effective without a SIP revision. However, the rule does not in any way limit the Commission's authority to amend the SIP.

The emissions inventory submitted to EPA anticipated growth in emissions in both the area source and minor source categories, as well as the major source category. In order to ensure that any growth in emissions due to the granting of de minimis exemptions will not cause total emissions to exceed the growth projections for these categories, the Division will keep track of the permitted allowable emissions that may result from sources and source categories entitled to such exemptions. In addition, the growth in emissions from area, major and minor source categories will be tracked when the Division performs the periodic inventories described in the SIP for the years 1999, 2002 and 2003. Any permitted growth in emissions due to de minimis exemptions will be added to the emissions for the source categories as reflected in the most recent periodic inventory. No further de minimis exemptions will be granted if the total growth in emissions exceeds the growth projections contained in the SIP. In addition, if the total growth exceeds the growth projections contained in the SIP, one or more of the contingency measures will be implemented to offset such growth, or the SIP will be revised as necessary to ensure continued maintenance of the standard.

The purpose of the addition of Regulation Number 7, Section II.E. is to provide sources with a process to obtain approval of an alternative emission control plan, compliance method, test method, or test procedure without waiting for EPA to approve of a site-specific SIP revision. The rule provides that any such alternative must be just as effective as the relevant regulatory provision, and that such effectiveness must be demonstrated using equally effective test methods and procedures. The changes to this section delegate the authority to the Division to approve of such alternatives. Since rulemaking is not required under Section II.E., the language allowing a source to assert that the relevant regulatory provision does not represent RACT has been omitted from this section. Such a change to the substantive requirements of Regulation Number 7 would require a rule change.

The rule revision proposed by the RAQC provided that alternative emissions control plans and compliance methods must be just as effective as those contained in the rule, but did not describe the test methods to be used to demonstrate such effectiveness. The Division proposed an alternative rule requiring such effectiveness to be demonstrated using test methods and procedures that are just as effective as those set out in the rule, or that have otherwise been approved by EPA. Such criteria for test methods and procedures are necessary in order to obtain EPA approval of this SIP revision. However, even without this language in the rule the Division would have required approved test methods and procedures in order to approve of proposed alternatives. The Division's alternative proposal provides the needed certainty in the most flexible manner possible.

Furthermore, the alternative proposed by the Division does not impose any new regulatory requirement. Instead, it merely establishes criteria for allowing persons' subject to the regulation to propose, in their discretion, an alternative means of complying with the existing regulatory requirements. Therefore, the alternative proposal submitted by the Division and adopted by the Commission will have no regulatory impact on any person, facility, or activity.

The rule revisions provide that no permit may be issued based on the provisions allowing for the creation of de minimis exemptions and the approval of alternative compliance plans without first revising the SIP unless EPA first approves of such regulatory revisions as part of the State Implementation Plan. The purpose of this condition is to address the possible disapproval of these revisions by EPA. In the event these changes are not approved by EPA, the remaining regulatory provisions of Regulation Number 7 will remain in full force and effect, and therefore, the EPA may approve of the maintenance plan and the redesignation request.

The revisions to Regulation Number 7 are procedural changes that are not intended to reduce air pollution.

For clarification, the Commission adopted these regulation revisions as follows:

REGULATION REVISION	OZONE SIP AND MAINTENANCE PLAN
Section I.A.1	Exists in Appendix C of the Ozone Maintenance Plan to become a part of that document approved March 21, 1996
Sections I.A.2., 3., 4.; Section II.D., II.E.	Adopted as subsequent regulation revisions to be submitted to the Governor and EPA separately and concurrently as a revision to the Ozone SIP (and Maintenance Plan)

The specific statutory authority to promulgate the rules necessary for redesignation is set out in §§ 25-7-105(1)(a)(I) and (2); -106(1)(a); -107 (1) and (2.5); and -301. The authority to adopt such rules includes the authority to adopt exceptions to the rules, and the process for applying for any such exemptions.

C. November 21, 1996 (Section XII.)

This Statement of Basis, Specific Statutory Authority and Purpose complies with the requirements of the Colorado Administrative Procedures Act, § 24-4-103, C.R.S. and the Colorado Air Pollution Prevention and Control Act, § 25-7-110.5, C.R.S.

Basis

Regulation Numbers 3, 7 and the Common Provisions establish lists of Negligibly Reactive Volatile Organic Compounds (NRVOCs). The revisions adopted update the list of NRVOCs so that the state list remains consistent with the federal list. Additionally, because perchloroethylene will no longer be listed as a VOC in Regulation Number 7, Section XII, Control of VOC Emissions from Dry Cleaning Facilities using Perchloroethylene as a Solvent, is being deleted. Regulation Numbers 8 and 3 list the federal Hazardous Air Pollutants (HAPs). In the June 8, 1996 Federal Register the EPA removed Caprolactam (CAS 105-60-2) from the federal list of Hazardous Air Pollutants. The conforming changes in Regulation Number 3, Appendices B, C and D have been made to keep the list of federal HAPs in Regulation Number 3 consistent with the federal list. The list of HAPs in Regulation Number 8 has been removed and a reference to the list in Regulation Number 3 has been added.

Specific Statutory Authority

The Colorado Air Pollution Prevention and Control Act provides the authority for the Colorado Air Quality Control Commission to adopt and modify regulations pertaining to organic solvents and photochemical substances. § 25-7-109(2)(f) and 25-7-109(2)(g), C.R.S., grant the Commission the authority to promulgate regulations pertaining to organic solvents and photochemical substances. §§ 25-7-105(1)(l)(b) and 25-7-109(2)(h) provide authority to adopt emission control regulations and emission control regulations relating to HAPs respectively. The Commission's action is taken pursuant to authority granted and procedures set forth in §§ 25-7-105, 25-7-109, and 25-7-110, C.R.S.

Purpose

These revisions to Regulation Numbers 3, 7, 8 and the Common Provisions are intended to update the state lists of NRVOCs, the Ozone SIP, and HAPs for consistency with the federal lists.

D. October 15, 1998 (Section II.F.)

The Gates Rubber Co. Site-specific Revision

The Gates Rubber Co. (Gates), by and through its attorney, submitted this Statement of Basis, Specific Statutory Authority and Purpose for amendments to Regulation Number 7, Control of Emissions of Volatile Organic Compounds.

Basis

Regulation Number 3 contains a certification and trading of emission reduction credits section (Section V), which sets forth the definitions and process for obtaining emission credits and using those credits. This section was amended to permit the use of emission reduction credits (ERC) to satisfy reasonably available control technology (RACT) requirements. The criteria for approval of ERC transactions specifies that they must involve like pollutants (for volatile organic compounds, the same degree of toxicity and photochemical reactivity), must be within the same nonattainment area, may not be used to satisfy Federal technology control requirements and may not be inconsistent with standards or regulations or to circumvent new source performance standards, best available control technology, lowest available emission rate technology controls or NESHAPs.

Regulation Number 7 sets forth CTG and RACT emission limitations, equipment requirements and work practices intended to control emission of volatile organic compounds (VOC) from new and existing stationary sources. The control measures specified in Regulation Number 7 are designed to reduce the ambient concentrations of ozone in ozone nonattainment areas and to maintain adequate air quality in other areas.

Specific Statutory Authority

The provisions of C.R.S. §§ 25-7-105 and 25-7-109 to 110 provide the specific statutory authority for the amendments to this regulation adopted by the Commission. The Commission has also adopted in compliance with C.R.S. § 24-4-103(4), this Statement of Basis, Specific Statutory Authority and Purpose.

Purpose

The purpose of this amendment to Regulation Number 7 is to establish a source specific rule for Gates to allow the use of emission reduction credits to satisfy the RACT requirements for VOC emissions pursuant to Regulation Number 7 for surface coatings operations not specifically listed in Section IX of Regulation Number 7. Regulation Number 3 provides specific authorization to use emission reduction credit transactions as an alternative compliance method to satisfy CTG and RACT requirements.

Specifically, the VOC certified emissions reduction credits to be used in this emission credit transaction in an amount up to 12 tons per year are from Coors Brewing Company pursuant to their emissions reduction credit Permit. The emission reduction credits will be used to satisfy the general requirements that all sources apply RACT. These emission reduction credits will be used by Gates so that Gates can use solvent-based surface coatings which contain VOCs periodically in lieu of the water-based coatings normally used on its 10 Cord coating line (S033, S034, and S035). These credits will allow Gates to meet RACT requirements without applying control technology to the 10 Cord line, other than the currently installed catalytic incinerator on the emissions from the drying oven from the fourth dip, which reduces those emissions by at least 90%. The relevant portion of Regulation Number 3, which applies to the Gates credit transaction is Section V.F., entitled "Criteria for Approval of all Transactions." The first requirement is that the transaction involve like pollutants.

In the present case, the emission credit transaction involves the exchange of VOC pollutants. Coors credits for methanol will be exchanged for m-pyrol. Exhaust from the catalytic incinerator, which contains unconverted toluene and xylene, is routed to the curing ovens of the other zones of the 10 Cord line, including the first zone. The Division has previously found that, excluding the emissions from the non-compliant coatings addressed in this rule, the 10 Cord line has met RACT standards. The use of the non-compliant coatings adds no HAPs to the Gates emissions. Other non-criteria reportable pollutants are present at well below APEN de minimis quantities under scenario 2, which is applicable to the 10 Cord line. Regulation Number 3 further requires that toxic or VOC pollutants involve the same degree of toxicity and photochemical reactivity or else a greater reduction may be required. Since these pollutants are both toxics and VOCs (except that m-pyrol is not a toxic), both have been addressed.

All of these compounds are commonly used in the surface coating industry with appropriate safeguards during their use. With respect to toxicity of the Gates compounds, m-pyrol is not listed as a toxic compound on either the federal or state lists. Methanol, the VOC in the Coors credit, is a Bin C HAP. Because the m-pyrol in the non-compliant coatings is not a HAP, the Gates VOCs have equal or lower toxicity than those being purchased from Coors. Therefore, HAP emissions will be reduced in the airshed.

The photochemical reactivities of VOCs are important because of their impact on the ozone formation process in an airshed. The Air Pollution Control Division relied upon the work of Dr. William P.L. Carter, Professor at the University of California, whose article entitled "Development of Ozone Reactivity Scales for Volatile Organic Compounds" describes relative photochemical reactivity scales and comparisons. Dr. Carter notes that there are a number of ways to quantify VOC reactivities, but the most relevant measure of VOC effects on ozone is the actual change in ozone formation in an airshed. This results from changing the emissions of the VOC in that airshed which depends not only on how rapidly the VOC reacts and the nature of its atmospheric reaction mechanism, but also the nature of the airshed where it is emitted, including the effects of other pollutants which are present.

Dr. Carter further states that the VOC effect on ozone in the atmosphere can only be estimated using computer airshed models. The effect of changing the emissions of a given VOC on ozone formation in a particular episode will, in general, depend on the magnitude of the emissions change and on whether the VOC is being added to, subtracted from, or replacing a portion of the base case emissions.

Dr. Carter's derived relative reactivity scale includes reactive organic gases whose indices for maximum incremental reactivity (MIR) range from 0.004 to 6.5. The MIR values were updated in 1997. The VOCs and their respective MIR involved with this exchange are as follows:

Methanol	0.16
m-Pyrol	0.57

The pending emission credits of VOCs being used in the proposed emissions credit transaction are for methanol. The VOCs emitted from uncontrolled use of solvent-based coatings at Gates are from m-pyrol. Regulation Number 3 provides that if the VOCs are not of the same photochemical reactivity, a greater offset may be required. The Commission required that, based on a past ERC trade for Pioneer Metal Finishing, that methanol credits in a 1.1:1 offset ratio be exchanged for toluene and xylenes. Here, however, the Commission finds that m-pyrol and methanol have similar photochemical reactivities, so no offset will be required.

The second requirement states that the transaction must not result in an increased concentration, at the point of maximum impact of hazardous air pollutants. This provision was derived from the EPA Emissions Trading Policy Statement and referred to NESHAP requirements involved in bubble transactions. If this provision is interpreted to apply generally to a facility which is limited by an existing permit to some level of VOC emissions on a twenty-four-hour basis, any additional VOCs allowed pursuant to an emission transaction would by its application increase the concentration of VOCs at the maximum point of impact. Since it appears to have been intended to limit NESHAP offsets in bubble transactions, and no NESHAPs are applicable in the Gates transaction, and recognizing the earlier action of the Commission in approving the use of ERC transactions to satisfy CTG requirements and in approving a previous ERC transaction for Pioneer Metal Finishing, the Commission determined that this requirement should not apply to this transaction.

The next requirement states that no transaction may be approved which is inconsistent with any standard established by the Federal Act, the state Air Quality Control Act or the regulations promulgated under either, or to circumvent NSPS requirements or BACT or LAER, although the Commission may approve a transaction using a certified emission reduction credit in lieu of a specified CTG method or RACT. The emissions involved in this transaction at Gates are not subject to NSPS, BACT, or LAER. Regulation Number 7 applies only RACT to the Gates operations involved. Regulation Number 3 clearly permits the use of emission reduction credits to satisfy RACT.

The emission must involve sources which are located within the same nonattainment area. In the present case, both Gates, whose operations are located at 900 S. Broadway, Denver, Colorado, who is proposing to use the credits, and the source of the credits, Verticel, whose operations were located at 4607 South Windermere Street, Englewood, Colorado, are located in the Denver nonattainment area, less than five miles apart.

The next requirement prohibits the use of emission reduction credits to meet applicable technology-based requirements for new sources, such as NSPS, BACT, or LAER. As stated, the Gates operations involved in this transaction are not subject to NSPS, BACT, or LAER or any other technology-based requirement except for RACT requirements for which an ERC transaction may be used to satisfy such requirements.

The next requirement states that VOC trades will be considered equal in ambient effect where the trade is a pound for pound trade in the same control strategy demonstration area. It appears that this requirement, which was taken from the EPA Emissions Trading Policy Statement, made the assumption that the "pound for pound" trend would have an equal impact on the ambient environment, with respect to ozone. Since there was no independent photochemical reactivity equivalency requirement in the 1986 Policy Statement, this requirement appears to be redundant with the requirement for insuring the same degree of photochemical reactivity among traded pollutants.

For VOC trades involving surface coating, the requirements state that emissions must be calculated on a solids-applied basis and must specify the maximum time period over which the emissions may be averaged, not to exceed 24 hours. The proposed emissions credit transaction is based on a 24-hour period. With respect to the solids-applied basis calculation, this transaction will be calculated on the basis of the pounds of VOCs from uncontrolled solvent-based coatings.

The emissions credit transaction will require a SIP revision. The source specific rule for Gates will be forwarded to EPA for approval. The state emissions permit for Gates pursuant to the emissions credit transaction will be state effective (but not federally effective) until the SIP revision is approved by EPA.

Gates proposed the following VOC emissions limitation in its state permit taking into consideration the pounds per year VOC emissions allowed by this emissions credit transaction:

1. A daily maximum limitation of 400 lbs. of VOC emissions from uncontrolled solvent-based surface coatings, calculated on a monthly basis for compliance purposes. Calculations will be performed by the 30th of the following month.
2. An annual limitation of no more than 24,000 lbs. (12 tons) of VOC emissions from uncontrolled solvent-based surface coatings.

Gates proposes to calculate the annual total VOC limitation on a rolling 12-month basis. Gates further proposes to keep monthly totals of non-compliant surface coatings used and to calculate daily usage based on monthly usage divided by the number of days' non-compliant surface coatings were used. Records of usages and calculations will be kept and produced at the Division's request.

This source-specific rule has a negligible or no effect upon the other provisions of the ozone SIP.

It is contemplated that a State construction permit will be issued to Gates upon final approval by the Commission. Should the approval come after the issuance of Gates' Title V operating permit, the terms of the construction permit will be added to the operating permit.

E. January 11, 2001 (Sections III.C., IX.L.2.c.(1), and X.D.2. through XI.A.3.)

Readoption of Changes to Regulation Number 7 that were not printed in the regulation or the Colorado Code of Regulations.

Background

This Statement of Basis, Specific Statutory Authority and Purpose complies with the requirements of the Administrative Procedures Act, C.R.S. (1988), §§ 24-4-103(4) and (12.5) for adopted or modified regulations.

Basis

During a review of the version of Regulation Number 7 adopted by the Air Quality Control Commission and the version of Regulation Number 7 published in the Colorado Code of Regulations, several significant discrepancies have been identified. This rule making will clarify the Commission's intent to adopt the following revisions to Regulation Number 7:

1. Section III.C regarding General Requirements for Storage of Volatile Organic Compounds omits the following revision:

"Beer production and associated beer container storage and transfer operations involving volatile organic compounds with a true vapor pressure of less than 1.5 PSIA at actual conditions are exempt from the provisions of Section III.B."
2. Section IX.L.2.c.(i) contains discrepancies in reference to the permit number of Coors Brewing Company Emissions Reduction Credit Permit issued on July 25, 1994.
3. Section X.D.2. through Section XI.A.3. was omitted from the CCR as published in the current version of Regulation Number 7.

Specific Statutory Authority

§§ 25-7-109, C.R.S. (1997) authorize the Commission to adopt emission control regulations.

Purpose

Re-adoption of the proposed rule will eliminate the discrepancies between the Commission's adopted provisions within Regulation Number 7 and those contained within the Colorado Code of Regulations. Adoption of the amendments will benefit the regulated community by providing sources with consistent information.

F. November 20, 2003 (Sections I.A.2. through I.A.4., II.D. and II.E.)

The Commission repealed the provisions establishing a procedure for granting exemptions for de minimis sources, and the procedure for approving alternative compliance plans without source-specific SIP revisions. The Commission had adopted the repealed provisions in March 1996, but had delayed the effective date pending EPA approval through the SIP revision process. Earlier this year, EPA informed the Commission of its intent to disapprove the provisions unless they were withdrawn. Thus, the provisions that are the subject of this rulemaking action never took effect. The Commission hereby repeals such provisions in order to avoid disapproval of the earlier SIP submittal, and to remove extraneous provisions from Regulation Number 7. Such repeal is required in order to comply with federal requirements, and is not otherwise more stringent than the requirements of the federal act.

§§ 25-7-105(1)(a)(I) and 25-7-301 authorize the Commission to adopt and revise a comprehensive SIP, and to regulate emissions from stationary sources, as necessary to maintain the national ambient air quality standard for ozone in accordance with the federal act.

G. March 12, 2004 (Sections I.A, I.B., XII., and XVI.)

The March 2004 revisions were adopted in conjunction with the Early Action Compact Ozone Action Plan, which is a SIP revision for attainment of the 8-hour ozone standard by December 31, 2007. The Commission adopted four new control measures in Regulation Number 7 to reduce emissions of volatile organic compounds (VOC). The control measures require the installation of air pollution control technology to control: (1) VOC emissions from condensate operation at oil and gas (E&P) facilities; (2) emissions from stationary and portable reciprocating internal combustion engines; (3) certain VOC emissions from gas-processing plants; and, (4) emissions from dehydrators at oil and gas operations.

The new requirements in Sections XII., and XVI. apply to a larger geographic area than the pre-existing requirements of Regulation Number 7, as set out in Section I.A. of the rule. The reference to the "Denver Metro Attainment Maintenance Area", which is not a defined term, in Section I.A was changed to refer to the "Denver 1-hour ozone attainment/maintenance area", which is defined in the Ambient Air Quality Standards Rule. Similarly, the reference to the "Denver Metropolitan Nonattainment Area Ozone Maintenance State Implementation Plan" was changed to the "Ozone Redesignation Request and Maintenance Plan for the Denver Metropolitan Area," which is the correct name of the document submitted to EPA in May 2001.

Regarding VOC emissions from condensate operations, the Commission has determined that an overall reduction of 47.5% VOCs is required of each E&P operation so as to meet the requirements of the SIP. Further the Commission decided not to take a unit-by-unit approach, but rather, the amendments take a more flexible approach to regulating such emissions by requiring sources that have filed, or were required to file, APENs to choose emission controls and locations for applying those controls. This approach also minimizes the risk that sources may reconfigure tanks to avoid implementing the regulation.

Section XII.A.6. provides an exemption for owners and operators with less than 30 tpy of flash emissions subject to APEN reporting requirements. Regulation Number 7 previously included more general exemptions for emissions from condensate operations, but such pre-existing exemptions should have been repealed as part of this revision to Regulation Number 7. To the extent any pre-existing exemption for condensate operations remains, such pre-existing exemption shall not be construed to supersede the requirements of Section XII.

The rule also requires annual reports describing how E&P sources will achieve the requisite emission reductions. Such reports are necessary so that the Division can determine whether or not the emission reductions are being achieved.

Section XII.B. of Regulation Number 7 is required to ensure that existing and new natural gas processing plants employ air pollution control technology to control emissions from leaking equipment, and atmospheric condensate storage tanks (and tank batteries). The Commission is specifically requiring a leak detection and repair (LDAR) program for all gas plants, according to the provisions of 40 CFR Part 60, Subpart KKK, regardless of the date of construction of the affected facility. This is necessary to ensure these large facilities are well controlled and VOC emissions minimized.

Section XII. C. pertains to control of VOC emissions from natural gas dehydration operations. The Commission determined that, in order to meet the requirements of the SIP, emissions must be reduced from all dehydration operations located in the 8-hour Ozone Control Area if such operations produce emissions above the minimum threshold specified in the rule. Further the Commission decided that flexibility should be allowed in how emissions are reduced, so several options are listed from which a source owner or operator may choose. If other equally effective measures or control devices are available, the Division may, on a case-by-case basis, approve the use of such alternatives.

Similarly, Section XVI. establishes controls for reciprocating internal combustion engines. Both "lean" and "rich" burn engines are addressed and though the Commission has specified the default control technology to be applied to each engine type, the Division is allowed to approve alternative technology if a demonstration can be made that the alternative is at least as effective as the listed device in reducing VOC emissions. Parties to the rulemaking hearing provided evidence that suitable, cost-effective control equipment may not be available for some existing engines. The rule adopted by the Commission includes an exemption for lean burn engines if the owner demonstrates that such emissions controls would cost \$5,000 or more per ton of VOC removed. In calculating such costs, the Division shall use an appropriate amortization period and current discount rate. The Commission directs the Division to further investigate the question of whether controls are available and suitable for lean burn engines, and to recommend any revisions necessary for the regulation applicable to such engines. New engines locating in the control area must comply with the requirements effective June 1, 2004, but existing engines have until May 1, 2005 to come into compliance. Since the rule provides an exemption for existing engines that cannot be controlled for less than \$5,000 per ton, the rule must make the distinction between new and existing engines so that engines will not be moved into the area during prior to May 2005 and subsequently apply for such an exemption.

The Commission recognizes that, at this point in time, the controls required by the rule amendments constitute Reasonably Available Control Technology (RACT), at a minimum, and in some cases, the controls mandated by this regulation may, in fact, constitute Best Available Control Technology (BACT). This means that this regulation shall not be used: (a) to preclude a source from asserting that one of the controls mandated herein constitutes BACT or Lowest Achievable Emissions Rate (LAER) for a new source or major modification, (b) require the Division or Commission to mandate different control technologies as BACT, or (c) preclude the Division or Commission from requiring additional or more stringent air pollution control technologies as necessary or appropriate to comply with applicable BACT or LAER requirements for new sources and major modifications.

By its terms, the New Source Performance Standard (NSPS) applicable to leaking equipment at onshore natural gas processing plants (40 CFR Part 60, Subpart KKK) applies to “affected facilities” and “process units” at such facilities as those terms are defined in the standard. In general, plants that were constructed prior to January 20, 1984 are exempt from the standard, unless subsequently modified or reconstructed, or newly constructed after that date. Since process units at a single gas plant can be distinct, certain gas plants may contain equipment that is not presently subject to the NSPS because of its date of construction. The control requirement in Section XII.B. would extend leak detection and repair program requirements to such equipment.

The statutory authority for the revisions to regulation Number 7 is set out in §§ 25-7-105(1)(a) and (1)(b); 25-7-106(1)(c), (5) and (6); and 25-7-109(1)(a) and (2), C.R.S.

The March 2004 revisions to Regulation Number 7 are based on reasonably available, validated, reviewed, and sound scientific methodologies. All validated, reviewed and sound scientific methodologies and information made available by interested parties has been considered. Evidence in the record supports the finding that the rule shall result in a demonstrable reduction in air pollution. The Commission chose the most cost-effective mix of control strategies available to comply with the 8-hour ozone NAAQS. Where possible, the regulations provide the regulated community with flexibility to achieve the necessary reductions. The Commission chose the regulatory alternative that will maximize the air quality benefits in the most cost-effective manner.

H. December 16, 2004 (Sections I.A., II.A., XII. and XVI.)

The December 2004 revisions were adopted to respond to U.S. EPA comments on the Ozone Action Plan the Commission adopted in March 2004. EPA required the rule revision in order to make the control measures incorporated into the State Implementation Plan practically enforceable as required by the federal Clean Air Act. The Federal Act requires all of the regulatory provisions adopted in this rulemaking action, and none of the provisions are more stringent than the requirements of the federal act.

The revised rule includes a process for obtaining emission reduction credit for pollution prevention measures. In order to qualify for an emission reduction credit, a pollution prevention measures must, among other things, be included in a permit even if it does not involve the construction of an air pollution source and would not otherwise trigger a requirement for a permit. The revisions to the regulation do not, however, create a requirement for sources to obtain a permit for pollution prevention measures for which the source will not take emissions reduction credit.

The Commission has the statutory authority to adopt the revisions pursuant to §§ 25-7-105(1)(a) and (1)(b); 25-7-106(1)(c), (5) and (6); and 25-7-109(1)(a) and (2), C.R.S.

The control measures necessary to achieve the 8-hour ozone standard were adopted in March 2004. The December 2004 rule changes do not impose new emission control requirements or emission reduction requirements on industry. Instead, the December 2004 rule revisions are intended to make the previously adopted requirements more enforceable, and to make sure that the requisite emission reductions occur during the ozone season when they are needed. Thus, the December 2004 are administrative in nature in that they are intended to assist with the administration and enforcement of the previously adopted controls. The Commission recognizes that the December 2004 rule amendments impose additional recordkeeping and reporting requirements, and therefore costs, on the regulated community. The changes, however, are not intended to achieve further reduction in emissions of volatile organic compounds beyond the reduction requirements adopted in March 2004. They are instead intended to make the March 2004 revisions fully enforceable and acceptable to EPA. Since the December 2004 rule changes are administrative in nature, the requirements of § 25-7-110.8 C.R.S. do not apply.

I. December 17, 2006 (Section XII.)

This Statement of Basis, Specific Statutory Authority and Purpose complies with the requirements of the Colorado Administrative Procedure Act §§ 24-4-103(4), C.R.S. for new and revised regulations.

Basis

Regulation Number 7, Section XII imposes emission control requirements on oil and gas condensate tanks located in Adams, Arapahoe, Boulder, Douglas and Jefferson Counties, the Cities and Counties of Broomfield and Denver and parts of Larimer and Weld Counties ("8-Hour Ozone Control Area"). The condensate tank requirements, along with other requirements applicable to oil and gas operations and natural gas fired reciprocating internal combustion engines, were initially promulgated in March 2004, and later revised in December 2004, in connection with an Early Action Compact Ozone Action Plan ("EAC") entered into between the State of Colorado and the United States Environmental Protection Agency. The purpose of the EAC is to prevent exceedances of the 8-Hour Ozone Standard and avoid a nonattainment designation for the area. Pursuant to the EAC, Colorado committed to limiting Volatile Organic Compound ("VOC") emissions from condensate tanks located in the 8-Hour Ozone Control Area to 91.3 tons per day ("TPD") as of May 1, 2007 and 100.9 TPD as of May 1, 2012. Because of unanticipated growth of condensate tank emissions since 2004, the control requirements for condensate tanks adopted during the 2004 rulemaking are insufficient to meet these daily emission numbers. The current revisions require a greater level of control of condensate tank emissions in the 8-Hour Ozone Control Area in order to meet the commitments set forth in the EAC and to prevent future exceedances of the 8-Hour Ozone Standard.

These revisions are based on reasonably available, validated, reviewed and sound scientific methodologies. All validated, reviewed and sound scientific methodologies made available by interested parties have been considered. Evidence in the record supports the finding that the rule shall result in a demonstrable reduction in air pollution, and will reduce the risk to human health or the environment or otherwise provide benefits justifying the costs. Among the options considered, the regulatory option chosen will maximize the air quality benefits in the most cost-effective manner.

Specific Statutory Authority

The specific statutory authority for these revisions is set forth in Section, 25-7-105(1)(a), C.R.S., which gives the Air Quality Control Commission authority to promulgate rules and regulations necessary for the proper implementation of a comprehensive state implementation plan that will assure attainment of national ambient air quality standards. Additional authority for these revisions is set forth in Sections, 25-7-106 and 25-7-109, which allow the Commission to promulgate emission control regulations and recordkeeping requirements applicable to air pollution sources. Specifically, § 25-7-106(1)(c) authorizes the Commission to adopt emission control regulations that are applicable to specified areas within the state. § 25-7-109(1)(a) authorizes the Commission to adopt emission control regulations. § 25-7-109(3)(b) authorizes the Commission to adopt emission control regulations for the storage and transfer of petroleum products and any other volatile organic compounds.

Purpose

The Revisions to Section XII. were adopted in order to meet the commitments with respect to condensate tank emissions set forth in the Early Action Compact Ozone Action Plan entered into between the State of Colorado and U.S. EPA, prevent exceedances of the 8-Hour Ozone Standard, and simplify recordkeeping and reporting requirements. To accomplish these goals, the revised regulation raises the system-wide control requirements for the ozone season from the current 47.5% to 75% commencing in 2007 and 78% in 2012. While the rule establishes a higher percentage reduction in 2012 the Commission recognizes that given the uncertainty of emissions growth over the next 6 years, this reduction requirement may be too high and may need to be revisited as the 2012 deadline approaches.

For the non-ozone season the required reduction has been raised from 38% to 60% commencing October 2007, and 70% commencing January 1, 2008. Determination of compliance during the ozone season under the revisions will be on a weekly basis instead of a daily basis, in recognition of the fact that condensate production is not typically measured on a daily basis. Under the previous version of the Rule, production could be tracked on something greater than a daily basis and the total divided by the number of days to obtain a daily number. As such, the prior rule did not truly give a daily average and thus the move to a weekly average is of little substance. Apart from this change, calculation of emissions for compliance purposes will remain the same as under the previous version of the rule. In addition to raising the system-wide reduction requirements, the current rule adds significant new monitoring, record-keeping and reporting requirements, and a "backstop" threshold requirement to have emission controls on all condensate storage tanks with uncontrolled actual emissions of 20 tpy or more of VOC flash emission, as a state-only requirement within the EAC area pursuant to Section XVII.C.1. of Regulation Number 7. Owners and operators will continue to keep a spreadsheet that tracks emission reductions and submit an Annual Report as required under the previous version of the rule. Owners and operators are now also required to submit a semi-annual report on November 30 of each year detailing their emissions during the preceding ozone season. Additional record keeping has been added so as to require that a weekly checklist be maintained detailing inspections of control devices. This checklist will assist operators in the inspection and maintenance practice and provide a record that proper inspections have been done. If the inspections show a problem with the control device, the owner or operator will be required to notify the Division of problems on a monthly basis. This requirement will allow the Division to track problems on a timelier basis and ensure compliance with the rule. Finally, a provision has been added to require owners or operators to submit a list of all their controlled tanks on April 30 of each year and notify the Division monthly during ozone season if the control status of any tank changes.

J. December 17, 2006 (Sections I.A.1.b. and XVII.)

This Statement of Basis, Specific Statutory Authority and Purpose complies with the requirements of the Colorado Administrative Procedure Act §§ 24-4-103(4), C.R.S. for new and revised regulations.

Basis

The Air Quality Control Commission has adopted these state-only provisions as a means of reducing air emissions from oil and gas operations throughout Colorado. Due to the large growth in oil and gas production in a number of regions of the state emissions from oil and gas operations have rapidly increased over the past few years and are expected to increase further in the foreseeable future. These revisions are a proactive measure designed to eliminate air emissions that could threaten attainment of ambient air quality standards and adversely affect visibility in Class I Areas. These revisions are based on reasonably available, validated, reviewed and sound scientific methodologies. All validated, reviewed and sound scientific methodologies made available by interested parties have been considered. Evidence in the record supports the finding that the rule shall result in a demonstrable reduction in air pollution, and will reduce the risk to human health or the environment or otherwise provide benefits justifying the costs. Among the options considered, the regulatory option chosen will maximize the air quality benefits in the most cost-effective manner.

Specific Statutory Authority

The specific statutory authority for these revisions is set forth in §§ 25-7-106 and 25-7-109 of the Colorado Air Pollution Prevention and Control Act ("Act"), which allow the Commission to promulgate emission control regulations and recordkeeping requirements applicable to air pollution sources. Additional authority is set forth in § 25-7-105.1, which allows the Commission to adopt state-only standards. Specifically, § 25-7-106(1)(c) authorizes the Commission to adopt emission control regulations that are applicable to the entire state. § 25-7-109(1)(a) authorizes the Commission to adopt emission control regulations. § 25-7-109(3)(b) authorizes the Commission to adopt emission control regulations for the storage and transfer of petroleum products and any other volatile organic compounds.

Purpose

The Revisions to Section XVII. were adopted in order to reduce air emissions from oil and gas operations and natural gas fired reciprocating internal combustion engines in Colorado. These revisions constitute a forward-looking approach to deal with a rapidly growing source of air emissions, and are designed to reduce the possibility of future problems with respect to the attainment of National Ambient Air Quality Standards and state and federal Class I Area visibility goals. Since the requirements are not mandated under federal law and are not currently necessary to meet National Ambient Air Quality Standards they are being adopted as a state-only requirement in accordance with the Act and as provided for under the Federal Clean Air Act.

These revisions establish emission control requirements for condensate storage tanks, glycol dehydrators and natural gas fired reciprocating internal combustion engines in Colorado. These provisions require that condensate tank and dehydrator controls meet a 95% percent control efficiency. As in the EAC Area, this requirement does not contemplate stack testing in order to verify the control efficiency. The insertion of the word average allows operators some downtime without a violation occurring so long as the downtime does not result in an average control efficiency of less than 95% considering the actual engineered control efficiency. For the purposes of XVII.C.4.b. observed operation of flare auto-igniters can include telemetric monitoring systems, physical on-site function tests or auditory confirmation of the auto-igniter function.

The requirements applicable to glycol dehydrators mirror the requirements applicable in the 8-Hour Ozone Control Area set forth in Section XII, and should be interpreted consistently with those provisions notwithstanding the addition of clarifying language. For example, language has been added clarifying that grouping of dehydrators is limited to dehydrators at a single site. Similarly, the word "production" has been added to the definition of condensate tank to clarify that the requirements, as within the EAC, do not apply to produced water tanks.

Determination of whether a condensate tank's emissions are at or above the threshold is based on the emissions from the tank during the preceding twelve-month period. If a tank has been in service for less than twelve months, applicability shall be based on uncontrolled actual emissions over the service period of the tank multiplied out to twelve months. Accordingly, if a tank has been in service for three months, applicability of the control requirements will be based on the uncontrolled actual emissions from the tank for those three months multiplied by four. If emissions from a controlled tank decrease, operators may remove the controls when emissions from the previous twelve-month period falls below the applicable threshold. Operators will remain responsible, however, for controlling a tank if a subsequent emission increase results in emissions being over the applicable threshold during the preceding twelve months.

For tanks serving newly drilled, recompleted or restimulated wells (including refrac'd wells) the owner or operator will have 90 days to determine anticipated production and, if necessary install a control device. In determining anticipated production, the owner or operator may use an appropriate decline factor to determine expected emissions over the first 12 months after the new drilling, recompletion or re-stimulation. If the owner or operator determines that emissions will be below the 20 tpy threshold following the new drilling, recompletion or restimulation, the owner or operator shall notify the Division of this determination.

Certain differences with the requirements applicable to the 8-Hour Ozone Control Area have been included in order to provide greater flexibility to operators in other areas of the state and in light of the fact that the regulation represents a proactive attempt to avoid future impacts from oil and gas emissions. Specifically, the standards for obtaining approval of an alternative pollution control device have been relaxed to promote innovative control strategies. Additionally, a provision has been added to allow an extension of the control requirement deadlines at the Division's discretion for good cause shown. This provision allows the Division to extend a deadline where shortages of control equipment, and crews may prevent an operator from meeting the deadlines, particularly in areas where access is limited by the weather or other issues.

With respect to Section VII.B.1.c. of the General Provisions, the Commission has determined that as a general rule during normal operations no emissions should be visible from the air pollution control equipment. Normal operations include reasonably foreseeable fluctuations in emissions from the condensate tank, including the fluctuations that occur during a separator dump. However, a transient (lasting less than 10 seconds) “puff” of smoke when the main burner ignites or shuts down would not be considered a violation of the “no visible emission” standard. Finally, a provision has been included that exempts units’ subject to the rule if such units are also subject to a control standard under the MACT, BACT or NSPS Programs. This exception is of most importance for new and newly relocated engines that may become subject to a currently pending NSPS Standard under Subpart JJJJ.

The engine provisions only apply to engines that are constructed or relocated into Colorado after the applicability date and do not impose requirements on units that are currently located in the state.

The Commission recognizes that the adopted emission control requirements represent a first step in addressing rapidly growing emissions from oil and gas operations throughout the state. Accordingly, the Commission directs the Division to provide an annual update on emission growth trends, environmental impacts, modeling and monitoring efforts, the adequacy of emission controls to protect the NAAQS and the health impacts of emissions from the oil and gas sector.

K. December 12, 2008 (Title, Sections I., II., VI. – XIII., XVII., XVIII., and Appendices A-F)

This Statement of Basis, Specific Statutory Authority and Purpose complies with the requirements of the Colorado Administrative Procedure Act §§ 24-4-103(4), C.R.S. for new and revised regulations.

Basis

The Air Quality Control Commission has adopted revisions throughout Regulation Number 7 to address ozone formation in the 8-Hour Ozone Nonattainment Area (NAA), including the 9-county Denver Metropolitan Area and North Front Range (DMA/NFR) NAA. Specifically, the Commission has adopted revisions to reduce an ozone precursor, volatile organic compound (VOC) emissions, and thus reduce ozone formation. These revisions are necessary to ensure attainment with the current 8-Hour Ozone National Ambient Air Quality Standard (NAAQS) set at 0.08 parts per million (ppm), and to achieve additional ozone reductions in light of both the new ozone NAAQS set at 0.075 ppm and the Governor's July 27, 2007 directive to proactively and pragmatically reduce ozone levels.

As of November 20, 2007, the EPA's deferral of a nonattainment designation for the area in question expired, signifying that the area is now considered nonattainment, or in violation of the 1997 8-hour Ozone NAAQS of 0.08 ppm for ground level ozone. The DMA/NFR includes all of Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, and Jefferson Counties as well as portions of Larimer and Weld Counties. This area is now known as the DMA/NFR NAA.

Pursuant to the Federal Clean Air Act, Colorado must prepare and submit a revision to the State Implementation Plan (SIP) to the EPA no later than June 30, 2009 that demonstrates attainment of the 8-Hour Ozone NAAQS no later than 2010. The Commission has adopted an Attainment Plan that satisfies this requirement. The Attainment Plan demonstrates attainment with no additional control measures.

Photochemical grid dispersion modeling indicates that without further emission controls, Colorado will attain the 8-hour standard by 2010. The dispersion modeling reflects that Colorado would attain the standard by a narrow margin. Photochemical dispersion modeling analysis is the primary tool used to assess present and future air quality trends, and is required for EPA to approve the state attainment demonstration in the SIP.

In addition, pursuant to EPA guidance, if modeling results indicate that the highest ozone levels will fall between 0.082 and 0.087 ppm, Colorado must conduct a “weight of evidence” analysis and other supplemental analyses in order to corroborate the modeling results. Colorado’s model results are within this range, and thus the state has conducted this analysis. The analysis supports the conclusion that Colorado will attain the standard by 2010.

The Commission is also adopting State-only revisions to Regulation Number 7 to further address ozone formation in the DMA/NFR NAA. Specifically, the Commission has adopted revisions to reduce an ozone precursor, volatile organic compound (VOC) emissions, and thus reduce ozone formation. These revisions help Colorado make progress toward eventual compliance with the new ozone NAAQS set at 0.075 ppm as well as the Governor’s directive to proactively and pragmatically reduce ozone levels.

Statutory Authority

The statutory authority for these revisions is set forth in the Colorado Air Pollution Prevention and Control Act (“Act”), C.R.S. § 25-7-101, et seq., specifically, C.R.S. §25-7-105(12) (authorizing rules necessary to implement the provisions of the emission notice and construction permit programs and the minimum elements of the operating permit program), 109(1)(a), (2) and (3) (authorizing rules requiring effective practical air pollution controls for significant sources and categories of sources, including rules pertaining to nitrogen oxides and hydrocarbons, photochemical substances, as well as rules pertaining to the storage and transfer of petroleum products and any other VOCs), and § 25-7-301 (authorizing the development of a program for the attainment and maintenance of the NAAQS).

Purpose

These revisions to Regulation Number 7 are part of an overall ozone reduction strategy. The Commission intends that this overall ozone reduction strategy accomplishes six objectives: A) reduce VOC and nitrogen oxides’ (NOx) emissions from oil and gas operations in the Ozone NAA and across the state, B) revise the control requirements for condensate tanks by a refined system-wide control strategy in the Ozone NAA, C) expand VOC RACT requirements for listed source categories for 100 tpy sources such that all Ozone NAAs are subject to Regulation Number 7’s RACT requirements, D) clarify how the RACT requirements in Regulation Numbers 3 and 7 interact in the Ozone NAA, E) improve the Division’s inventory of condensate emissions and other relevant sources in the NAA; and F) make typographical, grammatical and formatting changes for greater clarity and readability.

In support of objectives A-D and F, the Commission adopts these revisions to Regulation Number 7 to revise condensate tank regulations, set pneumatic controller regulations, expand RACT applicability and make associated corrections (Regulation Number 7, Sections I., II., VI. – XIII., XVII., XVIII., and Appendices A-F).

In the course of this proceeding, the Division and certain parties supported a compromise proposal regarding the control of condensate tanks. The Commission finds this proposal to be appropriate with certain changes noted herein. The Commission is requiring an increase from 75% to 81% control on a system-wide basis in 2009; to 85% control on a system-wide basis in 2010; and to 90% control on a system-wide basis in 2011 in the 8-Hour Ozone NAA. The Commission is adopting new VOC controls for pneumatic controllers in the 8-Hour Ozone NAA in Regulation Number 7, Section XVIII.

These system-wide control percentages achieve significant ozone precursor reductions in 2009, 2010 and 2011, with emphasis on significant VOC emissions reductions in 2010, during the monitoring period for the attainment demonstration. These revisions will help to ensure that the non-attainment area realizes the necessary reductions during the 2010 attainment year. Further, these revisions are an important step in putting the State on a path towards attaining the 2008 8-Hour ozone standard.

A number of parties including the Regional Air Quality Council and the North Front Range Metropolitan Planning Organization supported this proposal to secure VOC reductions from this source at these levels and according to this schedule. The system-wide approach has been approved by the Commission in the past, as well as by EPA in revisions to the State Implementation Plan. The Commission decided to defer decision making on the implementation of a 95% system-wide level of control, given concerns regarding the notable incremental cost associated with control to the equivalent of 2 tpy tanks as well as concerns regarding the flexibility intended to be afforded by a system-wide approach. Tank operators also expressed concern about the loss of incentive to over-control their systems to meet the standard, and the difficulty for small operators to control at the 95% system-wide level at this time.

The proposed control percentages continue to afford flexibility in operations to condensate tank operators, while ensuring attainment of the standard by 2010. Therefore, the Commission is deferring further control for future modeling, air quality analysis, and/or administrative review, whether to control this source in the future at the 95% system-wide control level or through some other approach for purposes of the 2008 8-Hour standard.

The provisions of the compromise proposal, including the commensurate emissions reductions, support the State Implementation Plan's ability to assure attainment and maintenance of the 1997 8-Hour Ozone NAAQS. Inclusion of these provisions enhances the Weight of Evidence demonstration supporting attainment by 2010 pursuant to this State Implementation Plan. The Commission recognizes parties subject to the compromise Regulation Number 7 provisions for condensate tank system-wide emissions reductions concur that these provisions are appropriate for inclusion in the State Implementation Plan.

Further the Commission intends to expand the applicability of RACT requirements to existing, new and modified sources in Ozone NAAs outside of the historic one-hour Ozone NAA or attainment/maintenance area (Regulation Number 7, Sections I and II). The Commission further intends to clarify how the control technology requirements of Regulation Number 7 interact with Regulation Number 3, Part B, Section II.D.2.

Finally, the Commission intends to make grammatical, typographical, formatting revisions, and other editing revisions throughout Regulation Number 7.

Condensate Tank Emissions Control

Condensate storage tank control requirements in Regulation Number 7, Section XII. are revised by reorganizing the rule, adding/revising definitions, adding monitoring requirements, revising recordkeeping and reporting requirements, and setting additional control requirements for tanks. The current requirements are reorganized by specifying applicability, definitions, general provisions, emissions controls, monitoring, and recordkeeping and reporting sections. The terms new, existing, modified/modification, auto-igniter, and surveillance system were defined.

Tanks serving newly drilled, recompleted or stimulated wells are required to employ air pollution control equipment during the first 90 days of production. After the first 90 calendar days, the control device may be removed. This requirement is designed to address the fact that production, and thus emissions, is at their greatest during the period immediately after drilling, recompletion or stimulation, and the fact that the actual production/emission level is not known prior to drilling, recompletion or stimulation. By requiring controls on all tanks serving newly drilled, recompleted or stimulated wells, the proposed rule significantly reduces emissions during the initial period, while allowing owners and operators to remove control devices afterward, as part of the overall system-wide control regime. All tanks over 2 tpy must participate in the overall system-wide program.

Furthermore, since Regulation Number 7's system-wide program is essentially RACT for condensate tanks in the NAA, new and modified 2 tpy or greater condensate tanks (affected by Regulation Number 3 RACT) may also move their control devices after the first 90 days when participating in the overall system-wide control regime, as long as the overall system-wide requirements are being met. Such flexibility is provided as to avoid two regulatory programs: one for tanks that might never be allowed to move their control devices under Regulation Number 3 RACT and one for tanks that would be allowed the flexibility under a system-wide program. Finally, it is the intent of this rule that sources may use their 2 tpy or greater "modified" tanks emissions (i.e., during those tanks' first 90 days of production) in the source's overall system wide calculation. After 90 days, sources must include – whether controlled or otherwise - the 2 tpy or greater "modified" tanks in the overall system-wide calculation. In the case of modified tanks that fall below 2 tpy, it is not the intent of the commission for sources to include these less than 2 tpy tanks in any system-wide calculation. However, sources may use the less than 2 tpy controlled tanks, if necessary to demonstrate system-wide compliance.

The Commission is requiring the installation and operation of auto-igniters for each combustion device. In many cases, condensate tanks are remotely located and unmanned. Auto-igniters will provide greater assurance that the control devices are functioning, under these circumstances. Auto-igniters may be relied on to identify when the pilot is not lit and attempt to relight it, and ensure control operation. The Commission is also requiring surveillance on batteries with uncontrolled emissions greater than 100 tpy. Operators must use surveillance to document the duration of time when the pilot is not lit, and to discover if repairs are necessary to ensure proper control operation. The Commission is targeting this size of battery in order to strike a balance between the need to more carefully monitor performance among the largest batteries, the cost associated with surveillance and the division's capacity to manage the information. The Commission acknowledges that three well operators, Encana, Anadarko and Noble Energy, have agreed to participate with the Division in a pilot program regarding the implementation of electronic surveillance systems.

With regard to recordkeeping and reporting requirements, operators will still record estimated emissions each week (as part of the current Regulation Number 7 requirements) and will report this information to the Division semi-annually. In addition, the Division has revised these requirements so that sources now must keep monthly records throughout the year and provide any of those records within 5 business days of a division request. Further, operators may only use a Division-approved spreadsheet to submit emissions records.

Further, a responsible official must now certify the accuracy of the data in the semi-annual reports. This level of recordkeeping and reporting will allow the Division greater capacity to verify compliance and additional availability to work with sources (especially smaller operators). The Commission intends that record-keeping and reporting requirements for surveillance apply only to tanks with uncontrolled emissions greater than 100 tpy.

Controls on 2 Tons Per Year Tanks and Lower

The Commission intends that substantial emissions reductions be achieved from condensate storage tanks and that industry retain the flexibility to decide which tanks to control in order to achieve those reductions. The rule has been revised to subject any condensate storage tank to this rule in the Applicability Section, but stipulates in the Emission Control Section that in order to determine the appropriate system-wide emissions reductions, only two tons per year tanks be considered.

In doing this, the Commission intends that tanks that emit actual uncontrolled volatile organic compound emissions of two tons per year or more be considered in determining compliance with the system-wide emissions reductions for the specific ozone non-attainment or attainment maintenance area, and that industry have the flexibility to control smaller tanks in those specific ozone non-attainment or attainment maintenance areas if needed in order to meet the applicable system-wide emissions reductions.

For example, if a company owns 20 tanks that emit actual uncontrolled volatile organic compound emissions of two tons per year in a specific ozone non-attainment area, and 15 tanks that emit less than two tons per year, the company would determine its required emission reductions of the production through the 20 two tpy tanks, but be able to control any of the 15 additional less than 2 tpy tanks in order to comply with the system-wide emissions reduction or maintain the desired over control as buffer. However, all tanks controlled in order to comply with the system-wide emissions reduction standard must have filed an APEN and obtained a valid permit in order to be considered as part of the compliance demonstration.

Calendar Weekly and Calendar Monthly Records and Reports

The Commission intends that records and associated reports demonstrating compliance with the weekly emission reduction requirement shall start with the calendar week containing May 1st and end with the calendar week containing September 30th, or other specified dates in the rule. A calendar week begins midnight Sunday morning and ends the following Saturday evening at midnight. Thus, where May 1st falls on any day other than Sunday, the calendar week of May 1st begins on midnight of the preceding Sunday morning. Similarly, the weekly emission reduction requirement applies to the full calendar week that includes September 30th.

So, if September 30th falls somewhere in the middle of a calendar week, the emissions reduction requirement applies to that calendar week in full, beginning midnight Sunday morning and ending the following Saturday evening at midnight.

Consequently, calendar monthly records and associated reports demonstrating compliance with the monthly emission reduction requirement shall apply to midnight the morning of day 1 through midnight the evening of the last day of each specific calendar month.

The Commission intentionally broadened the definition of surveillance to provide that: 1) electronic surveillance is not specifically required, and other means to gather information from remote locations is allowed; and 2) data only had to be gathered on a daily basis. The Commission intends that currently required surveillance need only monitor combustion device flame presence or temperature once every day, in order to balance the need to gather adequate data on combustion device operation with the amount of data to be gathered, handled and processed. The Commission believes this is a fair approach considering that only the largest atmospheric condensate storage tanks (those with actual uncontrolled volatile organic compound emissions equal to or greater than 100 tons per year) are subject to this surveillance requirement.

Finally, the Commission intends that the monitoring be completed to ensure compliance, and has determined that failing to monitor as required, losing monitoring data, and failing to maintain monitoring data should be treated similarly to recordkeeping requirements. Thus, these actions "may be treated by the Division as if the data were not collected."

The Commission intends that system-wide emissions control requirements apply to each specific ozone non-attainment or attainment maintenance area and not collectively to all ozone non-attainment or attainment maintenance areas state-wide. This means that the system-wide emissions control requirements apply specifically to the Ozone Control Area (a.k.a. the Denver Metropolitan Area/North Front Range Ozone Control Area), separately from any future designated ozone non-attainment area. Each new ozone non-attainment area designated in the future shall be subject to the system-wide control requirements by themselves. This is needed to ensure that necessary controls are achieved and maintained in each ozone non-attainment or attainment maintenance area, and that these controls are not removed and offset by system-wide controls in some other ozone non-attainment area.

Pneumatics Emissions Control

This revision establishes new VOC controls for pneumatic controllers in the 8-hour Ozone NAA in Regulation Number 7, Section XVIII. Pneumatic controllers are widely used in the oil and gas industry to control or monitor process parameters such as liquid level, gas level, pressure, valve position, liquid flow, gas flow and temperature. Pneumatic controllers of interest are instruments that are actuated using natural gas pressure (of which some natural gas may be bled to the atmosphere from the pneumatic controller and some may be vented from the associated valve). Natural gas-actuated pressure relief devices are not intended to be covered by this rule. There are high-bleed controllers designed to emit more than six standard cubic feet of gas per hour (scfh) to the atmosphere, and low-bleed controllers that emit six scfh or less. Historically, high-bleed controllers have been used.

A 2003 EPA study reported that emissions from pneumatic controllers are collectively one of the largest sources of methane emissions in the natural gas industry. Estimated annual nationwide methane emissions are approximately 31 billion cubic feet (Bcf) from the production sector, 16 Bcf from the processing sector, and 14 Bcf from the transmission sector. As stated, by definition, high-bleed pneumatic controllers emit more than six scfh of natural gas to the atmosphere. The highest bleed rate listed in one source, a table published by the EPA, is 42 cubic feet per hour (cfh). The average bleed rate for high-bleed pneumatic controllers in the NAA is 21 cfh. Natural gas is primarily composed of methane, but also contains other compounds including VOCs and hazardous air pollutants (HAPs).

VOC emissions from pneumatic controllers within the NAA were 24.8 tons per day (tpd) for the 2006 baseline and have been projected to be 31.1 tpd for the 2010 baseline. These emissions represent 14.0 and 15.1 percent of the total VOC emissions from oil and gas sources in the NAA in 2006 and 2010, respectively. Therefore, emission reductions related to this source category have the potential to be significant.

These rules require that most high-bleed controllers must be replaced with the equivalent of low-bleed or better pneumatic controllers by May 1, 2009. There is an exception that allows high-bleed controllers that the Division agrees are necessary for safety purposes. Operators must inspect and maintain in-use high-bleed controllers on a monthly basis. Operators must also keep logs of the number of in-use high-bleed controllers, as well as the reasoning that high-bleed controller remains in place, and the inspection and maintenance of the in-use high-bleed controllers. These revisions further require operators to physically tag the in-use high-bleed controllers to enable the Division to track compliance.

The oil and gas industry has already begun replacing high-bleed controllers with low-bleed controllers, understanding the financial gain of minimizing the bleed rate of pneumatic controllers.

RICE Controls

Reciprocating internal combustion engine (RICE) requirements of Regulation Number 7, Section XVI, applies in what was the early action compact area (now the Ozone NAA). These revisions extend the RICE requirements' applicability to a state-wide basis.

Expand and Clarify RACT Requirements

Regulation Number 7 is revised to expand its application to all subject sources in any Ozone NAA and Attainment/Maintenance Areas. This previously applied to the one-hour attainment/maintenance area nonattainment area. Accordingly, this regulation will apply to some sources that were previously outside of its geographic scope. It is intended that existing sources become subject to previously adopted Control Technique Guidelines (CTGS) or general RACT requirements, and are given time to comply to implement the general RACT requirements.

Specifically, existing sources that have not been modified are allowed three years from the date of ozone non-attainment designation to implement general RACT requirements. All new or modified sources become subject to these general RACT requirements upon commencing operation after the new ozone non-attainment designation date. This revision is considered a measured approach to ensuring the consistent use of best practices across the NAA as well as reductions in ozone precursors considered necessary to attaining the 8-hour ozone standard.

This revision expands Regulation Number 7's applicability to any Ozone NAA or attainment/maintenance area. This is done intentionally to apply Regulation Number 7 requirements to current as well as any future Ozone NAA or attainment maintenance areas in Colorado.

Additionally, this revision clarifies how the Regulation Number 3 RACT requirements interact with Regulation Number 7. This revision specifies that pursuant to Regulation Number 7, Section II.C. all existing sources that emit 100 tons per year of VOC emissions and that are located in the 8-hour Ozone NAA become subject to RACT.

Further, Regulation Number 7 is currently unclear on whether or not existing sources that are modified become subject to new source requirements. This revision clarifies that existing sources that are modified are subject to the Regulation Number 3, Part B, Section II.D. requirements and are considered to be a new source for the purposes of Regulation Number 7.

This revision also clarifies that the both case-by-case and general RACT requirements of Regulation Number 7, Section II.C. only apply to existing, new and modified sources. For sources at which all air pollution generating activities at that source are already subject to RACT or BACT, the RACT analysis would show that all activities are already subject to RACT or BACT. For any other air pollution generating activities not covered by RACT or BACT, the source would only have to complete a RACT analysis specific to those activities.

Typographical, Grammatical, Formatting and Other Changes

The commission changed the title of Regulation Number 7 to include NO_x. An outline of the sections is provided to better understand the contents of Regulation Number 7. Outdated sections are removed (i.e. Section II.F.1. specific to Gates Rubber Company, which is now out of business). Section XII., specific to condensate tanks in the Ozone NAA is reorganized for clarity. One appendix (new Appendix A) is added to provide maps of Ozone NAAs and chronologies of attainment designations, of which certain requirements key off. Finally, sections and appendices are renumbered and formatted as necessary.

Section 110.5 and 110.8 Analysis

Some of these revisions are not intended to be incorporated into Colorado's SIP. To the extent these revisions could be construed to exceed the requirements of federal law, the Commission provides the following additional statement, consistent with C.R.S. § 25-7-110.5(5)(a):

- (I) These rules are intended to reduce uncontrolled emissions of ozone precursor pollutants. The rules thereby serve to attain and maintain compliance with the National Ambient Air Quality Standard (NAAQS) for Ozone. However, there are no comparable federal requirements that apply to the sources in question.
- (II) There are no applicable federal requirements, other than the duty to attain the ozone NAAQS. There is considerable flexibility in meeting the NAAQS. However, there are very limited sources of uncontrolled anthropogenic ozone precursor emissions to target in order to reduce ozone. Consequently, the sources in question, as a significant source of uncontrolled VOCs and NO_x, must be targeted in order to attain the standard.

- (III) There are no applicable federal requirements, other than the duty to attain the ozone NAAQS. The ozone NAAQS was not determined taking into account concerns that are unique to Colorado.
- (IV) These rules may prevent or reduce the need for costly retrofit to meet more stringent requirements at a later date. The DMA/NFR non-attainment area has violated the 0.08 ppm ozone NAAQS. Colorado will soon be required to comply with the new ozone NAAQS of 0.075 ppm. Colorado Governor Ritter has directed that Colorado air quality planning agencies implement measures to reduce ozone to a level below the NAAQS. If these rules are not adopted now, it may be necessary to require costlier retrofitting in order to meet the Governor's directive as well as the new NAAQS.
- (V) Since there are no applicable federal requirements, there is no timing issue with regard to implementing federal requirements. However, these controls are intended to help the DMA/NFR attain the NAAQS. If the standard is not attained by the 2010 ozone season, the area may face a "moderate" non-attainment designation.
- (VI) The adopted rules will assist in establishing and maintaining a reasonable margin for accommodation of uncertainty and future growth.
- (VII) The adopted rules establish reasonable equity for sources subject to the rules by providing the same standards for similarly situated sources.
- (VIII) If the state rules were not adopted, other sectors may face a disproportionate share of the burden of reducing precursor pollutants.
- (IX) There are no corresponding federal requirements.
- (X) Demonstrated technology is available to comply. Sources are already using the control devices intended to be used to comply with these rules. However, sources face an additional burden of implementing auto-igniters and surveillance. The Commission anticipates a reasonable degree of delay in securing and installing the technology in question and has accommodated the sources by providing for a reasonable delay for the application of these requirements.
- (XI) The adopted rules will reduce VOC and NO_x emissions, thereby contributing to the prevention of the formation of ozone through the most cost-effective means available.
- (XII) Alternative rules requiring additional controls for other sources would also provide gains toward attaining the ozone NAAQS. However, oil and gas industry members are the largest anthropogenic stationary source of precursor pollutants in the State. A disproportionate benefit to this industry would accrue if their uncontrolled emissions remain at current levels compared to other stationary sources.
- (XIII) A no-action alternative may address the ozone NAAQS. Modeling and other analysis suggests that the NAA would attain the standard by 2010 without these rules. However, this analysis suggests that ambient levels of ozone would be very close to the NAAQS. These rules provide more assurance of attaining the ozone NAAQS while also providing for reductions that are necessary to make progress toward the new ozone NAAQS. No action would only delay the necessary reductions.

Further, pursuant to C.R.S. § 25-7-110.8(1), the Commission makes the determination that:

- (I) These rules are based upon reasonably available, validated, reviewed, and sound scientific methodologies, and the Commission has considered all information submitted by interested parties.

- (II) Evidence in the record supports the finding that the rules shall result in a demonstrable reduction of ground-level ozone.
- (III) Evidence in this record supports the finding that the rules shall bring about reductions in risks to human health and the environment that justify the costs to implement and comply with the rules.
- (IV) The rules are the most cost effective, provide the regulated community flexibility, and achieve any necessary reduction in air pollution.
- (V) The selected regulatory alternative will maximize the air quality benefits of regulation in the most cost-effective manner.

L. January 7, 2011 (Outline and Sections I. and XVII.)

This Statement of Basis, Specific Statutory Authority and Purpose complies with the requirements of the Colorado Administrative Procedures Act, § 24-4-103, C.R.S., and the Colorado Air Pollution Prevention and Control Act, §§ 25-7-110 and 25-7-110.5, C.R.S (the Act).

Specific Statutory Authority

The Colorado Air Quality Control Commission (Commission) promulgates this regulation pursuant to the authority granted in §§ 25-7-105(1)(c), C.R.S. (authority to adopt a prevention of significant deterioration program); 25-7-109(1)(a) (authority to require the use of air pollution controls); 25-7-109(2)(a) (authority to adopt emission control regulations pertaining to visible pollutants); and 25-7-114.4(1) (authority to adopt rules for the administration of permits).

Basis and Purpose

The Commission intends that the current Regulation Number 7, Section XVII.E.3.a. identifying technology-based control requirements for existing rich burn reciprocating internal combustion engines (RICE), or rich burn RICE that were constructed or modified prior to February 1, 2009, become a NO_x emission control measure that is included as part of the Regional Haze SIP and become federally enforceable upon EPA approval.

The technology-based control requirements of Section XVII.E.3.a. reduce NO_x. This proposal only changes the enforceability of these currently state-only requirements such that they become federally enforceable. This proposal does not change emission control, monitoring, recordkeeping or reporting requirements.

The Commission also intends that the following provisions, added in Sections XVII.E.3.a.(i)(a) through (c), will continue to be effective under the Regional Haze SIP. Specifically, these provisions require good air pollution control practices and allow for exemptions from the requirements for existing rich burn RICE. The exemptions apply to any existing rich burn RICE either with uncontrolled actual emissions below permitting thresholds or that is subject to a New Source Performance Standard (NSPS), National Emission Standard for Hazardous Air Pollutants (NESHAP), or Best Available Control Technology (BACT) limit.

Existing lean burn RICE requirements are not incorporated into the Regional Haze SIP, as the associated controls do not reduce NO_x or SO₂.

Colorado has determined that it is reasonable and appropriate to make these RICE requirements federally enforceable in this first planning period, as part of the state's strategy for addressing reasonable progress towards achieving natural visibility conditions in federal Class I areas.

M. December 20, 2012 (Sections II., XII., and XVII.)

This Statement of Basis, Specific Statutory Authority and Purpose complies with the requirements of the Colorado Administrative Procedure Act §§ 24-4-103(4), Colorado Revised Statutes (C.R.S.) for new and revised regulations.

Basis

Regulation Number 7 is designed to implement substantive regulatory programs authorized under the Colorado Air Pollution Prevention and Control Act (Act) including provisions of the State Implementation Plan (SIP) addressed in C.R.S. § 25-7-105(1)(a), emission control regulations addressed in C.R.S. § 25-7-105(1)(b) and authorization of the development of a program for the attainment and maintenance of the National Ambient Air Quality Standards (NAAQS) in C.R.S. § 25-7-301, as well as other authorized programs under the Act. The current revisions have been promulgated in order to facilitate this goal. The revisions were made to address the U.S. Environmental Protection Agency's ("EPA") partial disapproval of Colorado's ozone SIP.

On August 5, 2011, EPA published the "Approval and Promulgation of State Implementation Plans; State of Colorado; Attainment Demonstration for the 1997 8-Hour Ozone Standard, and Approval of Related Revisions" (76 Fed. Reg. 47443, August 5, 2011). EPA partially approved and partially disapproved revisions to Colorado's SIP adopted by the Air Quality Control Commission (Commission) in December 2008 and submitted to the EPA in June 2009.

Statutory Authority

The statutory authority for these revisions is set forth in the Colorado Air Pollution Prevention and Control Act, C.R.S. § 25-7-101, et seq., specifically, C.R.S. § 25-7-105(12) (authorizing rules necessary to implement the provisions of the emission notice and construction permit programs and the minimum elements of the operating permit program), 109(1)(a), (2) and (3) (authorizing rules requiring effective practical air pollution controls for significant sources and categories of sources, including rules pertaining to nitrogen oxides and hydrocarbons, photochemical substances, as well as rules pertaining to the storage and transfer of petroleum products and any other VOCs), and § 25-7-301 (authorizing the development of a program for the attainment and maintenance of the NAAQS).

Purpose

The Commission revised Regulation Number 7 to address the EPA's partial disapproval of Colorado's Ozone State Implementation Plan ("SIP"). On August 5, 2011, the EPA issued a final action on Colorado's June 2009, Ozone SIP submittal, both approving Colorado's attainment demonstration for the 1997 8-Hour Ozone National Ambient Air Quality Standard (NAAQS) and disapproving specific revisions to Regulation Number 7. 76 Fed. Reg. 47443, August 5, 2011. Specifically, the EPA disapproved both the repeal of Regulation Number 7, Section II.D. and all revisions to Section XII. as adopted by the Commission in December 2008. As a basis for its action, the EPA stated that Colorado demonstrated attainment with the 1997 8-Hour Ozone NAAQS, however Colorado did not adequately provide an anti-backsliding demonstration for the revisions to Regulation Number 7 that were adopted by the AQCC in December 2008, and submitted to the EPA in June 2009.

The Commission intends that these 2012 revisions include both SIP and state-only revisions that address EPA's partial disapproval of SIP provisions in Sections II.D and XII., and make related state-only revisions to Section XVII. for consistency. The Commission does not intend that these 2012 revisions add or strengthen emissions control measures of Section II.D., XII. or XVII. at this time. All SIP revisions are intended to specifically address those provisions that EPA included as part of its basis for disapproving revisions to Regulation Number 7.

While the EPA indicated general approval of the concept of the June 2009 SIP submittal, the EPA took exception to some of the details in the SIP revisions, characterized as “deficiencies,” that formed the basis of EPA’s disapproval during the SIP review process. EPA’s objections to the 2009 SIP revisions and the Commission’s responses are summarized as follows:

1. Section II.D. – Alternative Control Plans and Test Methods

EPA Objection: The EPA objected to the deletion of SIP approved language, allowing for alternative control plans and testing methods.

Commission Response: The Commission reinstated the SIP approved language.

2. Section XII.C.2. – Emission Factor Calculation Methodology for Condensate Tanks

EPA Objection: The EPA objected to the deletion of the term “gas-condensate-glycol separators” from the emission factor requirements for atmospheric condensate tanks.

Commission Response: The Commission made no revision to the rule text, and instead explained to EPA that this term was used in error as such a separator does not exist. The term used here is a misnomer, which the Commission believes refers to a flash tank located on a glycol dehydration unit, covered by Section XII.H. It is inappropriate to apply emission factor calculation methodology for atmospheric condensate tanks to glycol dehydrators because their emissions vary greatly.

3. Section XII.D.2.a. – System-wide Control Requirements for Condensate Tanks

EPA Objection: The EPA objected to the sunset of the system-wide control requirement in Section XII.D.2.a.(x), which ended the control requirement as of April 30, 2013.

Commission Response: The Commission revised the system-wide control requirements so that the system-wide control requirements do not sunset. Neither the Commission nor the parties to the December 2008 rulemaking intended for the system-wide control to end. The sunset was unintentionally caused when making other revisions to the rule text.

4. Section XII.E.3. – Monitoring Combustion Devices as Control for Condensate Tanks

EPA Objection: The EPA objected to providing a state-only monitoring option (electronic surveillance) as a substitution for the SIP required monitoring of combustion devices being used to control emissions from condensate tanks in accordance with Section XII.

Commission Response: The Commission removed the option of conducting state-only electronic monitoring in lieu of the SIP approved monitoring requirement. This allowance to substitute a SIP required monitoring provision for a state-only monitoring provision was unintentional. None of the sources employing electronic surveillance may use it in place of the SIP approved requirement. If conducted, the electronic surveillance monitoring option must occur in addition to the SIP approved monitoring requirement.

5. Section XII.F.3. – Recordkeeping for Condensate Tanks

EPA Objection: The EPA objected to the lack of SIP required recordkeeping for the control requirement in Section XII.D.1., which requires all condensate tanks at exploration and production sites to be controlled during the first 90 days of well production.

Commission Response: The Commission revised Section XII.D.1. to specify it is state-only. The Commission and parties to the December 2008 rulemaking intended for this first 90-day control requirement to be state-only, which corresponds to the state-only designation on the recordkeeping requirements under Section XII.F.3. Therefore, the Commission made no revision to Section XII.F.3., and instead revised Section XII.D.1. to alleviate this discrepancy.

6. Section XII.F.5. – Recordkeeping and Reporting Exemption for Compressor Stations and Drip Stations

EPA Objection: The EPA objected to the removal of a SIP approved provision that exempted natural gas compressors or drip stations from recordkeeping and reporting requirements, where total emissions from such facilities are less than 30 tons per year.

Commission Response: The Commission reinstated the SIP approved 30 tons per year provision.

7. Section XII.G.2. – Control Equipment Requirement for Natural Gas Processing Plants

EPA Objection: The EPA objected to two aspects of the revisions to this section. The first objection was replacement of the term “APEN de minimus levels” with “greater than or equal to two tons per year.” The second objection was inclusion of a rolling 12-month averaging period for the 95% control requirement.

Commission Response: The Commission made no revision to the replacement of the term “APEN de minimus levels.” The Commission explained to the EPA that the associated modeling relied on evaluating condensate tanks with emissions greater than or equal to two tons of volatile organic compounds per year. Therefore, the change in reference does not constitute a lessening of the stringency of the rule. In addition, the Commission removed the rolling 12-month averaging period.

8. Section XII.G.5. Recordkeeping and Reporting for Alternative Compliance Option

EPA Objection: The EPA objected to the reliance on Title V or construction permits as the location for recordkeeping and reporting requirements for condensate tanks at natural gas compressor or drip stations.

Commission Response: The Commission revised this section to specify recordkeeping and reporting requirements for condensate tanks at natural gas compressor and drip stations.

9. Section XII.H. Control Requirements for Glycol Dehydrators

EPA Objection: The EPA stated this entire section lacked clarity and contained redundant language.

Commission Response: The Commission revised the section in its entirety, while maintaining the intent and applicability of the requirements. Along with this revision, the Commission specified that this control requirement is applicable only to glycol dehydrators with emissions equal to or greater than one ton per year, but that all glycol dehydrators at a stationary source must be included for comparison to the 15 ton per year threshold. The term stationary source is defined in the Common Provisions. Further, the Commission revised the provision to include emission calculation methodology requirements in Section XII. H.

Items 1-9 are all SIP revisions. In addition, the Commission is also revising the state-only Section XVII.D. for consistency with the 2012 SIP revisions. The Commission does not intend that this state-only revision change the applicability of the control requirements for glycol natural gas dehydrators. Finally, the Commission made typographical, grammatical, and formatting revisions, as necessary.

N. February 23, 2014 (Sections II., XVII., and XVIII.)

This Statement of Basis, Specific Statutory Authority, and Purpose complies with the requirements of the Colorado Administrative Procedure Act §§ 24-4-103(4), the Colorado Air Pollution Prevention and Control Act, C.R.S. §§ 25-7-110 and 25-7-110.5., and the Air Quality Control Commission's ("Commission") Procedural Rules.

Basis

On October 18, 2012, the Commission partially adopted federal Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution found in 40 CFR Part 60, Subpart OOOO ("NSPS OOOO") into Regulation Number 6, Part A. During the partial adoption of NSPS OOOO, the Commission requested the Air Pollution Control Division ("Division") to consider full adoption at a later date and directed the Division to identify additional oil and gas control measures that complement and expand upon NSPS OOOO. This rulemaking is the result and further addresses the volatile organic compound ("VOC"), an ozone precursor, and other hydrocarbon emissions, such as methane, from the oil and gas sector.

The Commission supports the EPA's development of NSPS OOOO and believes that additional hydrocarbon control measures are warranted in Colorado for several reasons. First, the Denver Metropolitan Area/North Front Range is in nonattainment with EPA's current 8-Hour Ozone National Ambient Air Quality Standard ("NAAQS"); it is likely that EPA will lower the ozone NAAQS in the near future, potentially expanding Colorado's nonattainment area; and Division air monitors and other sampling indicate elevated levels of oil and gas related air emissions in oil and gas development areas. Second, Colorado has seen substantial growth of oil and gas development in recent years, which is a significant source of VOC emissions, and expects that growth to continue in the foreseeable future. In particular, oil and gas storage tanks contribute significantly to the VOC emissions from oil and gas development.

Further, oil and gas operations also emit methane, a negligibly reactive ozone precursor and potent greenhouse gas. Third, oil and gas operators have had difficulty meeting the current 95% control requirements in Regulation Number 7 established for condensate tanks in 2004 and 2006 due to "flash" emissions. Fourth, improved technologies and business practices, many already utilized by Colorado oil and gas operators, can reduce emissions of hydrocarbons such as VOCs and methane in a cost-effective manner. These technologies and practices include, without limitation, auto-igniters, low- or no-bleed pneumatic controllers, stabilized liquids or reduced tank pressures, flares achieving at least 98% destruction efficiency, and leak detection and repair (including the use of infrared ("IR") cameras).

For these reasons and more, the Commission believes additional control measures beyond the current requirements in Regulation Number 7 and NSPS OOOO are appropriate. Colorado's considerable experience with the regulation of oil and gas sources involves both SIP and state-only requirements. During the rulemaking process, various parties provided extensive evidence concerning whether the proposed revisions, in particular the STEM and LDAR requirements, should apply either statewide or only in the ozone nonattainment area. Based upon careful consideration of all the evidence provided during the rulemaking, the Commission determined it was appropriate to apply the proposed requirements statewide.

Further, in addition to the extensive evidence concerning the benefits of statewide hydrocarbon emission reductions, the Commission believes that the tiered and phased nature of many of the requirements properly focuses on emissions. Under this tiered approach, lower emitting sources such as marginal, stripper, and coal bed methane wells will appropriately be subject to less rigorous and costly requirements. In addition, evidence in the rulemaking record and testimony of industry members supports the conclusion that the rules can be effectively implemented.

Accordingly, the Commission concludes that the proposed rules are technologically feasible and cost-effective. Moreover, because these revisions apply on a state-wide, state-only basis, and are not a part of Colorado's SIP, the Commission, the Division, and stakeholders have the opportunity to further assess the implementation and effectiveness of these requirements, to better inform future actions.

Statutory Authority

The Colorado Air Pollution Prevention and Control Act, C.R.S. §§ 25-7-101, et seq., ("Act"), C.R.S. § 25-7-105(1) directs the Commission to promulgate such rules and regulations as are consistent with the legislative declaration set forth in § 25-7-102 and are necessary for the proper implementation and administration of Article 7. The Act broadly defines air pollutant and provides the Commission broad authority to regulate air pollutants. § 25-7-106 provides the Commission maximum flexibility in developing an effective air quality program and promulgating such combination of regulations as may be necessary or desirable to carry out that program. § 25-7-106 also authorizes the Commission to promulgate emission control regulations applicable to the entire state, specified areas or zones, or a specified class of pollution. §§ 25-7-109(1)(a), (2), and (3) of the Act authorize the Commission to promulgate regulations requiring effective and practical air pollution controls for significant sources and categories of sources, emission control regulations pertaining to nitrogen oxides and hydrocarbons, and emissions control regulations pertaining to the storage and transfer of petroleum products and other VOCs. § 25-7-109(2) (c), in particular, provides broad authority to regulate hydrocarbons.

Purpose

The following section sets forth the Commission's purpose in adopting the revisions to Regulation Number 7, and includes the technological and scientific rationale for the adoption of the revisions. The Commission adopts revisions to Regulation Number 7 to address hydrocarbon emissions from oil and gas facilities, including well production facilities and natural gas compressor stations. The Commission expands existing oil and gas control requirements and establishes additional monitoring, recordkeeping, and reporting requirements. For example, the revisions increase control requirements and improve capture efficiency requirements for oil and gas storage tanks. The Commission also seeks to minimize fugitive emissions from leaking components at natural gas compressor stations and well production facilities.

Further, the Commission intends to minimize emissions at new and modified oil and gas wells and wells undergoing maintenance and during liquids unloading events. The Commission also expands control requirements for pneumatic devices and glycol natural gas dehydrators. The Commission believes that this combination of revisions is appropriate to complement the full adoption of NSPS OOOO, and to further reduce emissions produced by the oil and gas industry.

Among other things, these revisions:

- Expressly address hydrocarbon emissions in Section XVII. and XVIII.;
- Amend definitions in Section XVII.A. and XVIII.B.;

- Strengthen good air pollution control practices, require use of auto-igniters, remove the off-ramp for condensate tanks if subject to a NSPS, MACT, or BACT, and remove the leak detection and repair requirements off-ramp for glycol natural gas dehydrators and internal combustion engines if subject to a NSPS, MACT, or BACT in Section XVII.B.;
- Expand condensate tank control requirements to apply state-wide, to all hydrocarbon liquid storage tanks, and to smaller storage tanks in Section XVII.C.;
- Limit venting and establish a storage tank emissions monitoring system ("STEM"), and associated recordkeeping and reporting requirements in Section XVII.C.;
- Expand glycol natural gas dehydrator control requirements in Section XVII.D.;
- Establish a leak detection and repair program for natural gas compressor stations and well production facilities in Section XVII.F.;
- Establish control measures for oil and gas wells in Section XVII.G.;
- Limit venting during well maintenance and liquids unloading in Section XVII.H.; and
- Expand pneumatic device requirements in Section XVIII.

The revisions also correct typographical, grammatical, and formatting errors found through the regulation.

The following explanations provide further insight into the Commission's intention for certain revisions and, where appropriate, the technological or scientific rationale for the revision.

Joint Applicability of NSPS OOOO and Regulation Number 7, Sections XII. and XVII.

It is possible for storage tanks to be subject to NSPS OOOO and Regulation Number 7, Sections XII. and XVII. While this creates some overlap between the different requirements, the requirements secure different emissions reductions. Regulation Number 7, Section XII. applies to condensate storage tanks in the 8-Hour Ozone Nonattainment Area, whereas NSPS OOOO applies to storage vessels that contain more than just condensate, such as produced water and crude oil. NSPS OOOO also applies to individual storage vessels, whereas Regulation Number 7, Sections XII. and XVII. apply to single tanks and, if manifolded together, the series of tanks in tank batteries. In addition, NSPS OOOO applies to storage vessels with six (6) tons per year ("tpy") of controlled actual VOC emissions, whereas Regulation Number 7, Sections XII. and XVII. base applicability on uncontrolled actual emissions. For these reasons, and considering that portions of Regulation Number 7, Section XII. are approved in Colorado's SIP, the Commission intends for the federal and state rules to jointly apply to storage tanks in Colorado.

Furthermore, because NSPS OOOO allows oil and gas operators to avoid applicability by establishing enforceable emission limits below NSPS OOOO applicability thresholds through a state, federal, or local requirement, most storage tanks subject to Regulation Number 7 will not be subject to NSPS OOOO monitoring or recordkeeping requirements. It is the Commission's intent that compliance with Regulation Number 7, Sections XII. and XVII. shall serve to establish legally and practically enforceable limits for the purpose of estimating emissions from storage vessels under NSPS OOOO. In those limited cases where storage tanks are subject to both NSPS OOOO and Regulation Number 7 control requirements, Regulation Number 7 will require some additional emissions monitoring. However, joint applicability is anticipated to be limited to those storage tanks whose uncontrolled actual VOC emissions are one hundred and twenty (120) tpy, the equivalent of the NSPS OOOO six (6) tpy VOC on a controlled actual basis. While this means that more storage tanks are regulated under Regulation Number 7, Section XVII., they are regulated on a state-only basis, and are not federally enforceable like NSPS OOOO.

Thus, the Commission believes joint applicability is necessary and intentionally removed storage tanks from the exemption in Section XVII.B.4. that allowed sources subject to an NSPS, MACT, or BACT control requirement to avoid having to comply with Section XVII.

It is also possible for glycol natural gas dehydrators and internal combustion engines to be subject to both federal and Regulation Number 7, Section XVII. leak detection and repair requirements. NESHAP HH and HHH require glycol natural gas dehydrators at major sources of hazardous air pollutants ("HAP") that utilize a closed-vent system to conduct annual visual inspections for leaks and defects that could result in air emissions. NESHAP HH and HHH also require detected leaks and defects be repaired within fifteen days, as long as it is technically feasible to do so without a shutdown. NESHAP HH also requires triethylene glycol ("TEG") natural gas dehydrators located at area sources of HAPs that utilize a closed-vent system to conduct annual visual inspections. However, the revisions to Regulation Number 7 require more frequent inspections of all types of glycol natural gas dehydrators at all facilities, resulting in more emissions reductions than NESHAP HH and HHH. Therefore, the Commission believes joint applicability concerning leak detection and repair requirements is necessary.

Applicability of Parts of Regulation Number 7 to Hydrocarbons

Many of the control measures set forth in these revisions have the benefit of reducing both VOC and other hydrocarbon emissions, such as methane. Sections XVII. and XVIII. have been revised to reflect the Commission's intent that the provisions contained therein reduce emissions of the broader category of hydrocarbons.

Visible Emissions

Regulation Number 7, Sections XII. and XVII. have historically contained a prohibition on visible emissions from combustion devices, such as flares. The Commission is not proposing to relax this requirement. To address comments from diverse stakeholders, the Commission is clarifying how Division inspectors and the regulated community are to determine compliance with the prohibition on visible emissions. The Commission has qualified that visible emissions are emissions of smoke that are observed for a period in duration of greater than or equal to one (1) minute during a fifteen (15) minute time period, pursuant to EPA Method 22. The Commission expects that both Division inspectors and the regulated community will, if any smoke is observed, determine whether the emissions are considered visible emissions for purposes of Regulation Number 7. The regulated community may, alternatively, immediately shut-in the equipment to investigate the cause for smoke and perform repairs. While the presence of visible emissions constitutes a violation of the rules, the Commission recognizes that there may be instances where visible emissions occur notwithstanding the owner or operator's best efforts, such as when an upset or malfunction occurs. Accordingly, the Division should consider the owner or operator's efforts and whether the visible emissions resulted from factors outside the owner or operator's control in determining how to best enforce this requirement.

Definitions (Section XVII.A.)

The Commission has revised or added definitions for several terms. Further explanation for a few of these terms is set forth.

"Approved instrument monitoring method" ("AIMM") means the methods and technologies utilized for monitoring storage tanks and components at well production facilities and natural gas compressor stations. The instrument being used for AIMM inspections must be capable of measuring hydrocarbon compounds at the applicable leak definition concentration specified in the revisions, and calibrated as appropriate. See EPA Method 21 at 6.0. In addition, while the definition lists EPA Method 21 and IR cameras, the Commission does not intend to limit industry to only EPA Method 21 and IR cameras as the Division may approve the use of additional monitoring devices and methods.

“Component” excludes compressor seals and open-ended valves and lines, which are defined separately, because they are designed to leak and are better addressed with equipment specific work practices, also included separately. Based on concerns that the requirements for small reciprocating compressors at well production facilities may not be cost-effective, the adopted work practices for reciprocating compressors are limited to reciprocating compressors located at natural gas compressor stations. Nevertheless, there is an issue as to whether compressors at well production facilities are a significant source of emissions. The Commission, therefore, directs the Division to investigate whether reciprocating compressors at well production facilities are a significant source of emissions, and if so, whether there may be appropriate, cost-effective work practices to reduce fugitive emissions from reciprocating compressors at well production facilities. The Commission further directs the Division to brief the Commission on this investigation in March, 2015.

“Date of first production” is meant to coincide with the date reported to the Colorado Oil and Gas Conservation Commission’s (“COGCC”) as the “date of first production,” as currently used in COGCC Form 5A. The Commission intends for oil and gas sources to use only one date for compliance with both COGCC and Commission requirements.

“Natural gas compressor stations” are subject to leak detection and repair requirements. This definition is meant to exclude compressors at well production facilities and gas processing plants. This definition is also meant to exclude natural gas compressor stations that are downstream of the natural gas processing plant at this time.

“Normal operation” is considered to include all operation, including maintenance and other activities, as long as the operation does not meet the definition of “malfunction” as set forth in the Common Provision regulations.

“Storage tank,” means a single storage tank or a storage tank battery if the storage tanks are manifolded together. In recent years, it has become more common for multiple storage tank batteries, sometimes containing different hydrocarbon liquids, to be manifolded at the emissions line and routed to a common control device. To further clarify the concept of manifolded within the definition of “storage tank,” the Commission revises the definition of storage tank to specify that a storage tank battery must be manifolded by liquid line, and not just by gas or emission line. This revision is in keeping with the rationale that a single tank could have been used to capture liquids in place of multiple small storage tanks in a battery. The Commission’s definition, and Colorado’s approach to emissions reporting and permitting for storage tanks, differs from EPA’s definition of “storage vessel” and the description of an affected storage vessel facility in NSPS OOOO because EPA considers each individual tank, even those in a battery manifolded by liquid line, to be a storage vessel for comparison against the applicability threshold. The Commission intends to maintain this distinction and, therefore, deletes the previously used definition of “atmospheric condensate storage tank” and creates a new definition of “storage tank” which expands upon the definition of storage vessel in NSPS OOOO to include storage vessels manifolded together by liquid line.

“Well production facilities” are also subject to leak detection and repair requirements and storage tank maintenance requirements. This definition is meant to include all of the emission points, as well as any other equipment and associated piping and components, owned, operated, or leased by the producer located at the same stationary source (a defined term specific to permitting). The “owned, operated, or leased” qualifier in the definition is not meant to reduce the stringency of LDAR requirements in situations where there are multiple owners or operators of the well production facility. This definition is meant to exclude natural gas compressor stations from “well production facility” and avoid overlapping LDAR requirements. This definition is also meant to exclude natural gas storage wells.

Good Air Pollution Control Practices (Section XVII.B.)

The Commission intends that all oil and gas operations, including those below control thresholds or even below Regulation Number 3 APEN and permitting thresholds, adhere to good general air pollution control practices. Examples of what the Commission considers to be a good air pollution control practice include, but are not limited to:

- Keeping the thief hatch, pressure relief valve, or other access point on storage tanks closed and properly sealed during normal operation, unless being actively used during periods of maintenance or liquids loadout from the storage tank;
- Inspecting and repairing seals on thief hatches, access points, or other openings of storage tanks;
- Initiating timely action to address leaks or unpermitted emissions; and
- Maintaining equipment and the facility in good operating condition.

Venting vs. Leaking (Sections XVII.B., XVII.C., and XVII.F.)

The Commission believes that emissions caused by over pressurization of oil and gas equipment are foreseeable, are not adequately addressed by NSPS OOOO, and should be addressed in Colorado specific regulations. The Commission intends these revisions to address venting emissions from storage tank thief hatches, pressure relief valves, or other access points during normal operations. Access points are not limited to points of entry of liquids or gas into the storage tank but include any route from which emissions can escape. The Commission recognizes that pressure release valves and other devices are meant to operate as safety devices and that venting for safety purposes may occur due to sudden, unavoidable equipment failures or surges beyond normal or usual activities that could not have been reasonably foreseeable, avoided, or planned. For example, an unplanned third party outage resulting in increased pressure along the system may be the type of malfunction or scenario where venting may be necessary for safety purposes. The Commission does not intend to increase risk or compromise safety of personnel and equipment. However, inadequate design of a storage tank emissions capture system is not a legitimate reason for venting.

Therefore, the Commission intends that the malfunction affirmative defense in the Common Provisions regulation continue to be available to owners or operators, provided that the owners or operators demonstrate that the elements of the malfunction defense have been met. The Commission intends that the burden remain on the owner or operator to demonstrate that an emission should not be considered venting as provided in Section XVII.C.2. The Commission further recognizes that meeting the no venting requirement may be challenging in some cases, and accordingly has adopted additional provisions requiring owners and operators to develop a STEM plan to help ensure compliance. In some cases, development and implementation of the STEM plan may be an iterative process involving ongoing improvements before continuous compliance with the no venting standard is achieved. With this in the mind, the Division should consider the efforts of owners and operators in developing and implementing their STEM plan as part of the Division's assessment about how best to enforce the no venting requirement.

In contrast with venting, leaking as used in Section XVII.F. more specifically relates to unintended emissions from components at well production facilities and natural gas compressor stations. Identification and repair of leaks in accordance with these revisions benefits the public, the environment, and the oil and gas industry. The Commission has determined that leaks discovered by the owner or operator or the Division inspector pursuant to the detection methods specified in Section XVII.F. shall not be subject to enforcement by the Division under certain circumstances.

For example, if a leak is identified and the owner or operator is in the process of timely and properly addressing the leak in accordance with these revisions, the Division should afford the owner or operator the opportunity to fix the leak absent enforcement. However, by this provision, the Commission does not intend to exempt owners or operators from their obligation to operate without venting or to utilize good air pollution control practices at all times.

Storage Tanks Controls (Section XVII.C.)

EPA established a six (6) tpy VOC threshold on a controlled actual emissions basis for applying storage vessel controls. In contrast, Colorado uses the sum total emissions from a tank battery, where multiple tanks are manifolded together, on an uncontrolled actual emissions basis for applying reporting, permitting, and control requirements. This means that the EPA's six (6) tpy threshold on a controlled actual emissions basis applies to individual tanks having the equivalent of one hundred and twenty (120) tpy VOC on an uncontrolled actual basis. Thus, more storage tanks are regulated under Regulation Number 7, Section XVII. than under NSPS OOOO.

The Commission intends that under Regulation Number 7, Section XVII., air pollution control equipment may be removed if: (1) the storage tank (including manifolded tanks) emissions fall below the uncontrolled actual six (6) tpy threshold, on a rolling twelve-month basis; and (2) those controls are not required by other applicable requirements. Conversely, if storage tank emissions increase above the uncontrolled actual six (6) tpy threshold on a rolling twelve-month basis, air pollution control equipment must be installed within sixty (60) days of discovery of the increase.

The Commission does not intend for the storage tank control, or related, requirements to apply to frac tanks that are located at a well production facility for less than 180 consecutive days.

Control Efficiency (Section XVII.C.)

The Commission expands the 95% control efficiency requirement to apply to storage tanks containing any hydrocarbon liquids (including condensate, crude oil, produced water, and intermediate hydrocarbon liquids), for consistency with NSPS OOOO. Produced water and crude oil storage tanks, which in years past were thought to have insignificant emissions, can instead be significant sources of emissions. This rule change is also a result, in part, of the removal of the APEN exemption in 2008 for tanks containing crude oil and less than 1% crude. The Commission intends that the air pollution control equipment achieve an average hydrocarbon control efficiency of at least 95%, and if a combustion device is used the device must have a design destruction efficiency of at least 98%, with few exceptions. The Commission recognizes and expects that most flares can control hydrocarbon emissions by 98% or more when properly operated.

Audio, Visual, Olfactory ("AVO") and Visual Inspections (Section XVII.C.)

The Commission intends that owners and operators of subject storage tanks (including storage tanks during the first ninety (90) days of production and storage tanks containing only stabilized liquids) conduct applicable AVO and visual inspections for venting or leaking. Visual inspections are in addition to AVO monitoring and require further inspections of the storage tank and associated equipment, such as thief hatches and air pollution control equipment. These inspections are not required to occur at the same time as loadout. Instead, loadout triggers the requirement for AVO and visual inspection, and indicates the frequency at which inspection is required.

Storage Tank Emission Management System ("STEM") Plan, Monitoring, and Recordkeeping (Section XVII.C.)

Owners and operators of storage tanks with uncontrolled actual emissions equal to or greater than six (6) tpy must develop, certify, and implement a STEM plan designed to ensure compliance with the "without venting" requirement of Section XVII.C.2., among other requirements. Through STEM, owners and operators must evaluate and employ appropriate control technologies, monitoring, maintenance, and operational practices to avoid venting of emissions from storage tanks. The Commission intends that sources have flexibility to develop STEM plans on an individual basis for each storage tank or for multiple storage tanks. However, upon request, the owner or operator must be able to identify to the Division what STEM plan applies to a storage tank and make that plan available for review. Owners and operators of storage tanks controlled during the first ninety (90) days of production or containing only stabilized liquids are not required to develop and implement a STEM plan. However, owners or operators of such storage tanks must still comply with applicable control, capture, monitoring, and recordkeeping requirements.

For purposes of clarification, the STEM plan is intended to include, but is not limited to, the following elements:

- A monitoring strategy including, at a minimum, the applicable inspection frequencies and methodologies;
- An identification of the personnel conducting the monitoring, and any training program, materials, or training schedule for such personnel. This element does not require training, but ensures that any training be documented to permit the owner or operator to demonstrate the quality and achievements of the STEM plan;
- The calibration methodology and schedule for emission detection equipment used in the monitoring;
- An analysis of the engineering design of the storage tank and air pollution control equipment, and where applicable, the technological or operational methods employed to prevent venting;
- An identification of the procedures to be employed to evaluate ongoing capture performance after implementation of the STEM plan;
- A procedure to update the STEM plan when capture performance is not adequate, the STEM design is not operating properly, when otherwise desired by the owner or operator, or when required by the Division; and
- The certification made by the appropriate personnel with actual knowledge of the STEM design for each storage tank.

In addition to AVO and visual inspections for storage tanks, STEM plans must include AIMM inspections on a frequency schedule that is tied to the uncontrolled actual VOC emissions from the storage tank. The Commission intends that the AIMM inspection satisfy any simultaneous AVO and visual inspection requirement.

The STEM plan should be maintained by the owner or operator for the life of the storage tank, while records of applicable monitoring only need to be retained for a period of two years. Upon sale or transfer of ownership of a storage tank, the relevant documentation and records should be transferred with the ownership. Owners and operators are encouraged to reevaluate any existing STEM plan for the storage tank upon purchase or acquisition of the storage tank.

Unsafe, Difficult, or Inaccessible to Monitor (Sections XVII.C. and XVII.F.)

The Commission does not intend to require owners or operators to conduct either AVO or AIMM inspections of unsafe, difficult, or inaccessible components or storage tanks and associated equipment. The Commission acknowledges that, in limited circumstances, unsafe to monitor may include unsafe weather or travel conditions. However, in those limited circumstances, the Commission expects the owner or operator to resume monitoring once the weather or travel conditions cease to be unsafe. Importantly, the Commission does not intend to allow owners or operators to delay required monitoring for the entire winter season.

Glycol Natural Gas Dehydrators (Section XVII.D.)

The Commission expanded the state-wide control requirements for glycol natural gas dehydrators. This revision requires that all existing glycol natural gas dehydrators with uncontrolled actual VOC emissions of six (6) tpy or greater be controlled with air pollution control equipment achieving at least a 95% reduction. This revision also requires that existing glycol natural gas dehydrators with uncontrolled actual VOC emissions of two (2) tpy or greater be controlled if the dehydrator is located within 1,320 feet of a building unit or designated outside activity area. The definitions for building unit and designated outside activity area are taken from COGCC regulations.

The Commission does not intend to apply this proximity requirement to the glycol natural gas dehydrator owner or operator's buildings, where public access to the building is also restricted. Further, because glycol natural gas dehydrators are different and unique sources, a similar proximity requirement for storage tanks is not appropriate at this time as storage tanks are more appropriately addressed based on emission thresholds.

This revision also requires that all new glycol natural gas dehydrators with uncontrolled actual VOC emissions of two (2) tpy or greater be controlled with air pollution control equipment achieving at least 95% reduction. If a combustion device is used, it must have a design destruction efficiency of at least 98%, with few exceptions. The Commission recognizes and expects that most flares can control hydrocarbon emissions by 98% or more when properly operated.

Leak Detection and Repair Requirements (Section XVII.F.)

The Commission believes the detection and timely repair of leaks is important in the efforts to reduce hydrocarbon emissions. The use of appropriate inspection instruments and methods, such as IR cameras, enhances the detection and reduction of emissions. The leak detection and repair program more broadly targets leaks from components at natural gas compressor stations and well production facilities, even if such facilities do not include storage tanks. In contrast, STEM targets venting from storage tanks. The use of an AIMM as it relates to leak detection and repair frequency is generally intended to complement the STEM monitoring schedule. The Commission has created a phased schedule and tiered approach for leak detection and repair that is based on emissions, recognizing that smaller operators and facilities may have lower emissions and may need additional time to comply. Owners or operators have flexibility in how to meet the leak detection and repair requirements, including utilizing their own equipment and personnel or hiring a third party contractor. Owners or operators also have flexibility in timing the AVO and AIMM inspections to coordinate overlapping AVO and AIMM inspections, as well as inspections of facilities in the same area or on the same inspection frequency. The Commission intends that the AIMM inspection satisfy any simultaneous AVO inspection requirement. However, the Commission expects that owners and operators will also utilize this flexibility to ensure that inspections are appropriately spaced on the frequency schedule (e.g. quarterly inspections will occur every three months but not, for example, on March 31 and April 1).

The Commission distinguished between new and existing well production facilities by utilizing an October 1, 2014, commenced construction date and created an inspection phase-in schedule for existing facilities. The Commission also distinguished the emissions thresholds for determining inspection frequencies for well production facilities with storage tanks and well production facilities without storage tanks. For well production facilities with storage tanks, the threshold determining inspection frequency is based on the uncontrolled actual VOC emissions from the highest emitting storage tank. For well production facilities without storage tanks, the threshold determining inspection frequency is based on "facility emissions." The Commission has determined that "facility emissions" means the controlled actual VOC emissions from all permanent equipment, including fugitive emissions calculated using the emission factors defined as less than 10,000 ppmv of Table 2-8 of the 1995 EPA Protocol for Equipment Leak Emission Estimates.

The Commission has defined a leak requiring repair in a manner that is dependent on the monitoring methodology. Leak detection methodologies have varied abilities to identify emission quantity and chemical makeup. EPA Method 21, for example, detects and quantifies hydrocarbon emission concentration, but does not speciate hydrocarbons (e.g., methane from other hydrocarbons) or identify the emission rate. Similarly, while IR cameras are becoming much more prevalent as a more affordable, time-saving, and user-friendly tool, they also do not speciate hydrocarbons or quantify the emission concentration. The Commission provides owners and operators flexibility in selecting a leak detection methodology.

If EPA Method 21 is utilized, the Commission set the threshold at which component leaks must be repaired at 2,000 parts per million ("ppm") hydrocarbons for existing natural gas compressor stations and 500 ppm for new (constructed after May 1, 2014) natural gas compressor stations and new and existing well production facilities. Where IR camera or AVO monitoring is utilized, a leak is any detectable emission not associated with normal equipment operation (e.g. the acceptable level of leaks from a component designed to leak). These values were determined based in part on a review of current federal or state leak detection and repair requirements for natural gas processing plants, refineries, and other oil and gas sources.

Leak detection values have decreased over time, in recognition of improved technologies and business practices. NSPS OOOO identifies leaks at natural gas processing plants at 500 ppm. Prior to NSPS OOOO, leaks were identified in other New Source Performance Standards (NSPS KKK and NSPS VVa) at 10,000 ppm. In addition, California, Wyoming, and Pennsylvania have varying leak detection and repair requirements and approaches to defining a leak. Some California air quality districts generally define a minor leak as between 1,000 and 10,000 ppm. Wyoming does not have a numerical limit. Pennsylvania essentially defines a leak at a well pad as anything with detectable emissions utilizing Method 21, as more than 2.5% methane or 500 ppm VOC, or no visible leaks using an IR camera. Upon consideration of all of the evidence presented, the Commission chose to define component leak at the foregoing thresholds.

The Commission expects that leaks that are not located specifically at a component will be addressed and repaired, in accordance with the general requirements to minimize emissions and employ good air pollution control practices. Further, the Commission finds that the repair deadlines set forth in Section XVII.F.7. provide flexibility for operational differences, including the potential range of leaks and degrees of repair difficulty that may be encountered. The Commission anticipates that many operators will choose to utilize IR cameras, in light of their relative ease of use and increased reliance by both by industry and regulators within Colorado and across the country. The Commission expects that owners and operators will remonitor leaks requiring repair with either the approved instrument monitoring method the owner or operator used to identify the leak or any method approved for remonitoring of leaks under EPA Method 21.

The Commission expects that in most instances the leak detection and repair requirements of this regulation will apply in lieu of leak detection and repair requirements in permits existing as of the promulgation date of the revisions. The Commission recognizes that leak detection and repair requirements in a few state permits may be federally enforceable, and this state-only regulation cannot supersede federal requirements. The Commission expects the Division and owners and operators to work cooperatively on the efficient implementation of leak detection and repair requirements, in those rare instances where there may be duplicative or competing requirements. During the rulemaking, several parties requested more stringent requirements for all oil and gas operations located within 1,320 feet of a building unit or designated outside activity area. Residents living within close proximity to oil and gas operations, particularly those living within 1,320 feet of oil and gas operations, may understandably have heightened concerns regarding potential impacts of emissions from such facilities. It is the Commission's understanding that some oil and gas owners and operators implement practices beyond what is currently required under state law in order to minimize emissions and otherwise be good neighbors, including conducting increased site inspections. The Commission supports such practices.

Also during the rulemaking, various parties provided extensive evidence concerning the frequency of instrument monitoring method inspections, the timing of leak repair, and the costs and benefits associated with more or less frequent monitoring and repair. The Commission recognizes that additional information would benefit the Commission, Division, industry, and other stakeholders and therefore encourages the Division to work with energy companies, to evaluate the comparative effectiveness of various kinds of instrument based monitoring methods and program designs at a range of types, sizes, and frequencies at well production facilities and natural gas compressor stations. The Commission also encourages the Division to work with industry and other stakeholders to evaluate emissions from and potential control strategies for downstream natural gas compressor stations and intermittent pneumatic controllers.

Lastly, several parties to the rulemaking requested greater transparency and public access to air quality information associated with oil and gas development. In particular, a coalition of local community organizations requested that owner and operators' annual reports as required by these rules be posted on the Division's website. The Commission believes these reports will provide important information when reviewing the efficacy of the inspection and maintenance program, as well as valuable information to interested citizens, particularly those who live in close proximity to oil and gas facilities. Therefore, the Commission requests that the Division make this information available in the most efficient means possible, which may include posting on the Division's website individual reports and/or a compilation summary. In addition, the Commission requests an annual briefing on these regulations. Such briefing will assist the Commission and interested stakeholders to understand the data and implementation issues relating to this new program, as well as other initiatives covered in this rulemaking. The Commission believes that this information would also be valuable to all parties.

Well Maintenance and Liquids Unloading (Section XVII.H.)

Over time, liquids build up inside a well and reduce flow out of the well. These liquids can slow and even block gas flow in wet gas wells and are removed during a well blowdown, also called liquids unloading. As a result of recent information, EPA has significantly increased their emission factor for liquids unloading. The uncontrolled emission factor is based upon fluid equilibrium calculations used to estimate the amount of gas needed to blow down a column of fluids blocking a well and Natural Gas STAR partner data on the amount of additional venting after a blowdown. Similar to the issues with well maintenance and well completion emissions, considerable uncertainty for liquid unloading emissions arises from the limited data sources used and the applicability of Natural Gas STAR program activities to calculate industry baseline emissions. This is especially important as liquid unloading emissions are estimated to comprise 33% of the uncontrolled methane emissions from the natural gas industry in the latest greenhouse gas inventory. EPA's Natural Gas STAR program advocates the use of a plunger lift system to reduce the need for liquids unloading, and indicates that such systems may pay for themselves in about one year. The Commission has determined that the use of technologies and practices to minimize venting, including plunger lift systems, are available and economically feasible, and encourages their use in Colorado.

Pneumatic Controllers (Section XVIII.)

The Commission recognized in a December 2008, rulemaking that pneumatic devices are a significant source of emissions. In addition, a 2013 University of Texas study concluded that methane emissions from pneumatics are higher than EPA previously estimated. Therefore, expanding the current low-bleed pneumatic device requirements statewide and further reducing emissions is appropriate and cost-effective. However, the Commission does not intend to expand the pneumatic device requirements to intermittent pneumatic controllers at this time. Further, while the use of low-bleed pneumatic controllers will result in a significant reduction of VOC and methane emissions from Colorado oil and gas facilities, no-bleed pneumatic controllers are currently commercially available to further reduce emissions from these sources.

However, because these devices can only be used at facilities with adequate electric power, and given the high cost of electrifying a facility, the Commission is only requiring the use of no-bleed pneumatic controllers at facilities that are connected to the electric grid, using electricity to power equipment, and where technically and economically feasible.

Additional Considerations

In accordance with C.R.S. §§ 25-7-105.1 and 25-7-133(3) the Commission states the rules in Sections XVII. and XVIII. of Regulation Number 7 adopted in this rulemaking are state-only requirements and are not intended as additions or revisions to Colorado's SIP at this time.

In accordance with C.R.S. § 25-7-110.5(5)(b), the Commission determines:

- (I) The revisions to Regulation Number 7 address VOC and other hydrocarbon emissions from oil and gas facilities, including storage tanks, glycol natural gas dehydrators, pneumatic controllers, well production facilities, and natural gas compressor stations. In addition to NSPS OOOO, NSPS Kb, and NSPS KKK, NESHAP HH, and NESHAP HHH may also apply to such oil and gas facilities. However, the Regulation Number 7 revisions apply on a broader basis to more storage tanks, glycol natural gas dehydrators, leaking components, and pneumatic controllers, and address more hydrocarbon emissions. For example, the Regulation Number 7 revisions address more glycol natural gas dehydrators than the major source provisions of NESHAP HH and HHH as well as more glycol natural gas dehydrators than the area source provisions of NESHAP HH, which are limited to TEG dehydrators. Similarly, the Regulation Number 7 revisions address more storage tanks than the major source provisions of NESHAP HH, as well as NSPS Kb, which exempt certain storage vessels storing condensate or petroleum prior to custody transfer. In addition, the Regulation Number 7 revisions address more component leaks than the major source provisions of NESHAP HH, as well as NSPS KKK, which has a 10,000 ppm leak threshold and only applies at natural gas processing plants.

Compared to NSPS OOOO, the revisions to Regulation Number 7 will apply a low- or no-bleed control requirement to more pneumatic controllers because NSPS OOOO only requires zero bleed pneumatic controllers at natural gas processing plants, while the Regulation Number 7 revisions no-bleed provision applies to all facilities. The revisions to Regulation Number 7 will also require a leak detection and repair program for more oil and gas operations because NSPS OOOO only requires leak detection and repair for natural gas processing plants, AVO inspections for storage vessels with controlled actual emissions greater than six (6) tpy, and annual visual inspections for leaks for subject centrifugal compressors. In contrast, the revisions to Regulation Number 7 require a leak detection and repair program for all components at all well production facilities and natural gas compressor stations.

Further, the revisions to Regulation Number 7 will require storage tanks with uncontrolled actual emissions equal to or greater than 6 tpy VOC to control emissions with 95% efficiency, while NSPS OOOO's threshold is 6 tpy controlled actual emissions (i.e. 120 tpy uncontrolled actual emissions). It is the Commission's determination that, given the current and projected levels of oil and gas development in Colorado combined with the advances in technology and business practices utilized by oil and gas operators, the revisions to Regulation Number 7 are appropriate to further address hydrocarbon emissions from this sector. Such emission reductions will, among other things, protect public health and the environment, address current and future ozone concerns specific to Colorado, reduce greenhouse gas emissions, and ensure the maximum beneficial use of a valuable natural resource.

- (II) NSPS OOOO, and the other federal rules discussed in (I), are primarily technology-based in that they largely prescribe the use of specific technologies in order to comply. EPA has provided some flexibility in NSPS OOOO by allowing a storage vessel to avoid being subject to NSPS OOOO if the storage vessel is subject to any state, federal, or local requirement that brings the storage vessel's emissions below the NSPS OOOO threshold (greater than or equal to 6 tpy controlled actual VOCs). The Commission chose to set the revised Regulation Number 7 controls at 6 tpy on an uncontrolled actual emissions basis, and therefore provide Colorado's oil and gas operators a limit for calculating the controlled potential to emit of their storage vessels, which may be used to avoid NSPS OOOO applicability.
- (III) Other federal requirements do not specifically and fully address the issues of concern to Colorado, or take into account concerns that are unique to Colorado. Specifically, during the development of NSPS OOOO, Colorado submitted comments regarding, among other things, concerns with the storage vessel definition, storage vessel control requirements, and lack of leak detection and repair requirements. Colorado's concerns were not fully addressed in NSPS OOOO, therefore, the Commission believes the revisions to Regulation Number 7 are necessary to: (a) address hydrocarbon emissions in a more comprehensive manner; (b) address oil and gas operations and equipment at lower thresholds than NSPS OOOO thresholds, yet that collectively have significant VOC and other hydrocarbon emissions in Colorado; (c) address venting of emissions from storage tanks at oil and gas facilities caused primarily by over pressurization; and (d) address leaks of fugitive hydrocarbon emissions, particularly from well production facilities and natural gas compressor stations.
- (IV) Compliance with the control requirements in the revisions to Regulation Number 7 provide Colorado's oil and gas operators a limit for calculating the controlled potential to emit of their storage vessels, thereby allowing many of these sources to avoid regulation under NSPS OOOO. Additionally, the revisions may prevent or reduce the need for costlier retrofits at a later date. Colorado may be required to comply with a lower ozone NAAQS in the near future and the Denver Metro/North Front Range area is currently in nonattainment with the ozone NAAQS, while other areas in the State are seeing elevated ozone levels, including areas of increasing oil and gas development. The revised rules are proactive and intended to reduce ozone levels now by utilizing controls and techniques already being used by some Colorado oil and gas operators, or that are readily available.
- (V) Adoption of these revisions at this time allows many of Colorado's oil and gas operators to utilize the controls established in the revisions to Regulation Number 7 to avoid NSPS OOOO storage vessel requirements. Postponement of adoption would potentially subject these sources to compliance with NSPS OOOO and then compliance with State requirements once State controls become effective.

- (VI) The revisions to Regulation Number 7 do not place limits on the growth of Colorado's oil and gas industry. Instead, the rules address hydrocarbon emissions from the oil and gas sector in a cost-effective manner, allowing for continued growth of Colorado's oil and gas industry. Indeed, the oil and gas industry has already grown in Colorado while utilizing many of the technologies and practices set forth in these revisions.
- (VII) The revisions to Regulation Number 7 establish reasonable equity for oil and gas owners and operators subject to these rules by providing the same standards for similarly situated and sized sources. Rules of general applicability have been developed along with tiered requirements and exclusions that tailor the rules to the regulated sources within the oil and gas sector. Furthermore, the application of the Regulation Number 7 revisions to oil and gas owners and operators regardless of location in the ozone nonattainment or attainment areas is equitable because the nonattainment area is not the only area in Colorado with ozone issues. For example, the Rangely monitor in western Colorado shows violations of the 2008 ozone standard and existing modeling shows that either the nonattainment area has increased its contribution to background ozone or ozone concentrations in the attainment area flowing into the nonattainment area have increased. Notably, the Division's inventory shows that the oil and gas industry contributes more than 50% of the VOC emissions outside the nonattainment area. This monitoring, modeling, and inventory data, considered with the likelihood of a lower ozone NAAQS and the expected growth of the oil and gas sector state-wide, supports the application of the Regulation Number 7 revisions to oil and gas sources in both the nonattainment and attainment areas.
- (VIII) The oil and gas industry is a large anthropogenic stationary source of VOCs, a precursor pollutant to ozone. If the revisions to Regulation Number 7 are not adopted, other aspects of oil and gas operations or other sectors may be looked to for additional emission reductions. In reductions must come from other operations or sectors at this time, the cost effectiveness would decrease because these revisions reduce emissions from the most significant contributors to VOC emissions and costs will be higher for less emissions reductions from less significant contributors.
- (IX) The majority of sources subject to the revised rules in Regulation Number 7 will not be subject to federal procedural, reporting, or monitoring requirements. Those few sources subject to both NSPS OOOO (e.g. storage vessels emitting 120 tpy uncontrolled actual VOC emissions) or NESHAP HH and HHH (e.g. glycol natural gas dehydrators at major sources of HAPs and TEG glycol natural gas dehydrators at area sources of HAPs) and Regulation Number 7 will be required to comply with both regulations. The procedural, reporting, and monitoring requirements of Regulation Number 7, to the extent different than federal requirements, are necessary to ensure compliance with and document the effectiveness of the revisions.
- (X) Demonstrated technology is available to comply with the revisions to Regulation Number 7. Some of the revisions expand upon requirements already applicable in the 8-Hour Ozone Nonattainment Area state-wide, such as the requirements for auto-igniters and pneumatic controllers. In addition, oil and gas owners and operators are already using many of the control devices and techniques intended to be used to comply with these revisions. The lead-in time provides owners and operators time to install control devices and develop plans for compliance. Should unanticipated events occur, such as a lack of availability of control devices, the revisions provide for Division approved extensions to compliance.

- (XI) As set forth in the Economic Impact Analysis, the revisions to Regulation Number 7 will contribute to the prevention of hydrocarbon emissions in a cost-effective manner. Significantly, the Commission expressly finds that the cost-effectiveness of the VOC emission reductions alone supports the revisions to Regulation Number 7. The reductions of other hydrocarbon emissions, such as methane, add to the already cost-effective and appropriate emission reduction requirements.
- (XII) Alternative rules, such as the alternative proposals provided by several parties during the rulemaking process, requiring differing or additional controls for oil and gas facilities could also provide reductions in hydrocarbon emissions. The Commission could have adopted some or all of the proposed revisions or proposed alternatives. However, the proposed revisions to Regulation Number 7 were developed during a lengthy stakeholder process and provided a balanced approach, reducing emissions from the oil and gas industry while allowing the sector to continue to play a critical role in Colorado's economy and the nation's energy independence. The alternative proposals provided during the rulemaking process were primarily either more or less stringent versions of the proposed revisions, further illustrating the balanced approach of the proposed revisions. Furthermore, a no action alternative would very likely only delay future reductions in hydrocarbon emissions, including ozone precursor pollutants, necessary for reducing ozone in Colorado.

As part of adopting the revisions to Regulation Number 7, the Commission has taken into consideration each of the factors set forth in C.R.S. § 25-7-109(1)(b).

The incorporation by reference of NSPS OOOO in Regulation Number 6 does not affect the requirements of these revisions to Regulation Number 7. Instead, these revisions to Regulation Number 7 are designed and intended to address differences and overlaps between NSPS OOOO and current state requirements, and to include additional emission control measures for oil and gas production and equipment. To the extent that C.R.S. § 25-7-110.8 requirements apply to this rulemaking, and after considering all the information in the record, the Commission hereby makes the determination that:

- (I) These rules are based upon reasonably available, validated, reviewed, and sound scientific methodologies, and the Commission has considered all information submitted by interested parties.
- (II) Evidence in the record supports the finding that the rules shall result in a demonstrable reduction of hydrocarbon emissions.
- (III) Evidence in the record supports the finding that the rules shall bring about reductions in risks to human health and the environment that justify the costs to implement and comply with the rules.
- (VI) The rules are the most cost-effective to achieve the necessary and desired results, provide the regulated community flexibility, and achieve the necessary reduction in air pollution.
- (V) The selected regulatory alternative will maximize the air quality benefits of regulation in the most cost-effective manner.

O. November 17, 2016 (Sections I., X., XII., XIII., XVI., XIX.)

This Statement of Basis, Specific Statutory Authority, and Purpose complies with the requirements of the Colorado Administrative Procedure Act §§ 24-4-103(4), the Colorado Air Pollution Prevention and Control Act, C.R.S. §§ 25-7-110 and 25-7-110.5., and the Air Quality Control Commission's ("Commission") Procedural Rules.

Basis

On May 21, 2012, the Denver Metro/North Front Range ("DMNFR") area was designated as Marginal nonattainment for the 2008 8-hour Ozone National Ambient Air Quality Standard ("NAAQS"), effective July 20, 2012 (77 Fed. Reg. 30088). On May 4, 2016, the U.S. Environmental Protection Agency's ("EPA") published a final rule that determined that DMNFR area failed to attain the 2008 8-hour Ozone NAAQS by the applicable Marginal attainment deadline and therefore reclassified the DMNFR area to Moderate and required attainment of the NAAQS no later than July 20, 2018, based on 2015-2017 ozone season data. Due to the reclassification, additional planning requirements were triggered, including the requirement to submit revisions to the State Implementation Plan ("SIP") that address the Clean Air Act's ("CAA") Moderate nonattainment area requirements, as set forth in CAA Section 182(b) and the final SIP Requirements Rule for the 2008 Ozone NAAQS (See 80 Fed. Reg. 12264 (March 6, 2015)).

Statutory Authority

The Colorado Air Pollution Prevention and Control Act, C.R.S. §§ 25-7-101, et seq., ("Act"), § 25-7-105(1) (a) directs the Commission to promulgate such rules and regulations necessary for the proper implementation and administration of a comprehensive state implementation plan that will assure attainment and maintenance of national ambient air quality standards. § 25-7-301 directs the Commission to develop a program providing for the attainment and maintenance of each national ambient air quality standard in each nonattainment area of the state.

§ 25-7-106 provides the Commission flexibility in developing an effective air quality program and promulgating such combination of regulations as may be necessary or desirable to carry out that program. § 25-7-106(1)(c) and (2) also authorize the Commission to promulgate emission control regulations applicable to the entire state, specified areas or zones, or a specified class of pollution, and monitoring and recordkeeping requirements. § 25-7-109(1)(a) authorizes the Commission to promulgate regulations requiring effective and practical air pollution controls for significant sources and categories of sources of air pollutants.

Purpose

The Regional Air Quality Council ("RAQC") and the Colorado Department of Public Health and Environment, Air Pollution Control Division ("Division") conducted a public process to develop the associated SIP and supporting rule revisions. Separately, EPA had expressed concerns with approving previous Regulation Number 7 revisions related to oil and gas control requirements and submitted in 2009 and 2013 for inclusion in Colorado's ozone SIP.

In response to these related but separate issues, the Commission revised Regulation Number 7 to strengthen Colorado's ozone SIP; and include reasonably available control technology ("RACT") requirements for lithographic and letterpress printing, industrial cleaning solvents, and major sources of volatile organic compounds ("VOC") or nitrogen oxides ("NOx"). More specifically, the Commission revised the applicability of Regulation Number 7 in Section I.A.1.; included the existing combustion device auto-igniter requirements in Section XII.C.1.e. and XII.E.2. in Colorado's ozone SIP; included existing audio, visual, olfactory ("AVO") storage tank inspection requirements for condensate storage tanks in Colorado's ozone SIP in Section XII.E.4.e.; added requirements for lithographic and letterpress printing in Section XIII.B.; added requirements for industrial cleaning solvents in Section X.E.; and added requirements for major sources in Sections XVI. and XIX.

Apart from the Moderate nonattainment area ozone SIP, the Commission revised Regulation Number 7 to address EPA's monitoring, recordkeeping, reporting, and other concerns with previously submitted Regulation Number 7 revisions. The Commission updated federal rule references for natural gas processing plants in Section XII.G.1.; renumbered the current Sections XII.G.5. and XII.G.6. under Section XII.I.; added monitoring, recordkeeping, and reporting requirements for glycol natural gas dehydrators in Sections XII.H.5. and XII.H.6.; and addressed other EPA concerns in Sections XII.C.1.c., XII.C.1.d., XII.C.2.a.(ii)(B), XII.E.3., and XII.H.4.

The revisions also correct typographical, grammatical, and formatting errors found through the regulation.

The following explanations provide further insight into the Commission's intention for certain revisions and, where appropriate, the technological or scientific rationale for the revision.

Ozone reclassification SIP revisions

8-hour ozone control area

All provisions of Regulation Number 7 currently apply to the Denver 1-hour ozone nonattainment and attainment/maintenance area. The 1-hour ozone area does not include all of Adams and Arapahoe counties or the portions of Larimer and Weld counties included in the 8-hour ozone control hour. Therefore, to ensure that all sources in the 8-hour ozone nonattainment area are subject to applicable RACT requirements in Regulation Number 7 on a federally enforceable basis, the Commission revised Regulation Number 7, Section I.A.1.a. to state that all provisions apply to both the 1-hour and 8-hour ozone areas. The Commission intends that provisions clearly marked "state-only" continue to be enforceable only on a state-only basis, and are not included in the SIP.

Auto-igniter and storage tank AVO

Regulation Number 7, Section XII.C.1.e. includes auto-igniter requirements for combustion devices used to control emissions of VOCs. Pursuant to Section XII.E., the auto-igniter must be inspected weekly to ensure it is properly functioning. Prior to the revision, these requirements were "state-only". The Commission revised these provisions to include the auto-igniter installation, operation, and monitoring requirements in the SIP.

Regulation Number 7, Section XII.E. includes requirements for owners or operators of condensate storage tanks subject to Section XII.D. to inspect combustion devices, vapor recovery units, control devices, and thief hatches. These are SIP requirements. Regulation Number 7, Section XVII.C.1.d. also requires of owners or operators of storage tanks subject to Section XVII. to conduct AVO and additional visual inspection at the same frequency as liquids load-out. The requirements of Section XVI.C.1.d. are enforceable on a "state-only" basis. The Commission revised Section XII. to include in the SIP, the requirement that owners and operators conduct AVO inspections of condensate storage tanks with uncontrolled actual VOC emissions of 6 tons per year ("tpy") or greater, making them federally enforceable.

Lithographic and letterpress printing RACT

Pursuant to CAA Section 182(b), Colorado's ozone SIP must provide for implementation of RACT at sources of VOC for which EPA has issued a Control Technique Guideline ("CTG"). EPA's Offset Lithographic Printing and Letterpress Printing CTG ("Printing CTG") addresses VOC emissions from the use of fountain solutions, cleaning materials, and inks at lithographic and letterpress printing operations. The Printing CTG recommends controlling VOC emissions from heatset printing with dryer emissions of at least 25 tpy of VOC from heatset inks with add-on control technology. The Printing CTG recommends controlling VOC emissions from cleaning materials and fountain solutions at printing operations with facility emissions equal to or greater than 15 lb/day by limiting the VOC content of cleaning materials and fountain solutions. The Printing CTG also recommends work practices for printing operations with facility emissions equal to or greater than 15 lb/day.

Colorado has sources in the ozone nonattainment area in this CTG VOC source category not currently subject to regulatory RACT requirements. Therefore, the Commission included these requirements in Section XIII.B. as RACT for these sources. However, rather than an applicability threshold of 15 lbs/day, the Commission adopted an applicability threshold of 3 tpy. This is roughly equivalent to the 15lbs/day threshold recommended in the Printing CTG. Based on the Printing CTG, the Commission added language to Section XIII.B.1.b. clarifying that fountain solutions, cleaning materials, inks (which include varnishes) and coatings used in lithographic and letterpress printing presses are considered part of the printing process and are not subject to the surface coating or industrial cleaning solvent requirements in Regulation Number 7. With respect to the compliance threshold for Section XIII.B., if the preceding 2 calendar year average indicates that a source meets or exceeds the 3 tpy threshold, then the source must comply with Section X.E. for the current calendar year. Only emissions from the printing operation and cleaning thereof should be considered in determining if emissions exceed 3 tpy.

The Commission included additional work practices, a VOC content limit for inks and monitoring, recordkeeping and performance testing requirements that are not specified in the Printing CTG but are intended to correspond to current permit requirements and ensure the enforceability of the requirements. With respect to the work practice requirements contained in Section XIII.B.1.c., the Commission applied these requirements to all lithographic and letterpress printing operations, regardless of potential or actual VOC emissions, because they are minimally burdensome, good housekeeping requirements that reduce emissions and correspond to current permit requirements.

With respect to the VOC content limit for inks, the Commission included a 40% limit for heatset web offset and heatset web letterpress printing operations that require higher VOC content ink, and a 30% limit for all other lithographic and letterpress printing operations that are commonly already using low VOC inks. Compliance with the VOC content requirement for inks is demonstrated using a weighted average which takes into account the amount of the different inks used and their respective VOC contents.

For consistency with the Printing CTG, cleaning solutions are subject to VOC content or vapor pressure requirements, except that sources using less than 110 gallons of non-compliant cleaning materials per calendar year are exempt from the VOC content or vapor pressure requirements. Larger heatset printing operations, whose maximum allowable emissions before controls from petroleum inks are 25 tpy VOC or more, are subject to a control requirement (not capture and control). Printing operations' emissions are more difficult to capture, and so capture is not considered in the percent control requirements. However, good air pollution control practices apply at all times.

Industrial cleaning solvents RACT

EPA's CTG for Industrial Cleaning Solvent ("Cleaning Solvent CTG") addresses solvent use in cleaning operations such as spray gun cleaning, spray booth cleaning, large manufactured components cleaning, parts cleaning, equipment cleaning, line cleaning, floor cleaning, tank cleaning, and small manufactured components cleaning. The Cleaning Solvent CTG applies to facilities with VOC emissions from the use of industrial cleaning solvents equal to or greater than 15 lb/day of VOC. The Cleaning Solvent CTG recommends a cleaning solvent VOC content limit and work practices.

Colorado has sources in the ozone nonattainment area in this Cleaning Solvent CTG VOC source category not currently subject to regulatory RACT requirements. Therefore, the Commission included requirements in Section X.E. as RACT. However, rather than an applicability threshold of 15 lbs/day, the Commission adopted an applicability threshold of 3 tpy on a calendar basis. This is roughly equivalent to the 15lbs/day threshold recommended in the CTG. The Commission intended for the term "industrial cleaning solvent operation" to be broad and apply to a wide range of work areas where manufacturing or repair activities are performed, but not to residential or janitorial cleaning.

The Commission included language to clarify that VOC emissions that are exempt from the industrial cleaning solvent rule do not count toward this 3 tpy threshold. Therefore, when determining whether a facility meets the applicability threshold of 3 tpy, a source should include facility-wide emissions from all industrial cleaning solvent operations and subtract those emissions that are exempt under Section X.E.4. In adopting the VOC content limit in Section X.E.1.a. and the vapor pressure limit in Section X.E.1.b., the Commission intended for these to be straight, as-applied limits for all industrial cleaning solvents used and not a weighted average. Additionally, in adopting the 90% control efficiency compliance option in Section X.E.1.c., the Commission did not intend for this control efficiency to include capture efficiency. The Commission acknowledged that capture efficiency may be lower than the control efficiency because industrial cleaning solvents are often used over large industrial complexes and result in relatively small VOC emissions.

With respect to the compliance threshold for Section X., if the preceding 2 calendar year average indicates that a source meets or exceeds the 3 tpy threshold, then the source must comply with Section X.E. for the current calendar year. The Commission also included monitoring, recordkeeping and reporting requirements that are not specified in the Cleaning Solvent CTG but are intended to align with current permit recordkeeping requirements and ensure the enforceability of the requirements.

The Commission included language in Section X.E.4.a.(ii) providing that industrial cleaning solvent operations subject to a work practice or emission control requirement in another federally enforceable section of Regulation Number 7 that establishes RACT are exempt from the requirements of Section X. This provision was included so as not to subject sources to overlapping, duplicative, or contradictory RACT requirements.

Therefore, if an industrial cleaning solvent operation is subject to a work practice or emission control requirement contained in another, federally approved section of Regulation Number 7, including but not limited to Sections IX. (surface coating operations), X.B. through X.D. (solvent cold-cleaners, non-conveyorized degreasers, and conveyorized degreasers), and XIII. (graphic arts and printing), then that operation would not also be subject to the requirements of Section X.E.4. However, this provision is not intended to exempt an industrial cleaning solvent operation from Section X. when the operation is subject to the restriction on disposal of VOCs by evaporation or spillage contained in to Section V.A. (and RACT is determined to be nothing). Therefore, if an industrial cleaning solvent operation is subject to Section V.A. and RACT is determined to be nothing, the operator must comply with Section X. Conversely, if an industrial cleaning solvent operation is subject to Section V.A. and RACT is determined to be a work practice or emission control requirement, then the operation is exempt from Section X. Lastly, the Commission adopted additional exemptions recommended in the Cleaning Solvent CTG in Section X.E.4.b. as well as an alternative compliance option for area source aerospace facilities in Section X.E.4.c. due to the unique solvent cleaning needs of those source categories.

Control requirements do not account for capture and control. General industrial solvent use emissions are more difficult to capture, and so capture is not considered in the percent control requirements. However, good air pollution control practices apply at all times.

Major VOC and NOx source RACT

Colorado has major sources of VOC or NOx (sources that emit or have the potential to emit greater than 100 tpy) in the DMNFR. While many of these sources are currently subject to regulatory RACT requirements in Colorado's SIP, some of the sources or emissions points are subject to RACT requirements in federally enforceable permits or New Source Performance Standard ("NSPS") or National Emission Standard for Hazardous Air Pollutants ("NESHAP"). However, as a Moderate nonattainment area, Colorado is submitting a SIP revision to include provisions requiring the implementation of RACT for major sources of NOx or VOC in the DMNFR. Therefore, the Commission included a work practice for combustion equipment at major sources of NOx emissions in Section XVI., a requirement for specific major sources to provide RACT analyses to the Division in Section XIX.B., and incorporated by reference applicable requirements of a NSPS or NESHAP in Sections XIX.C-G.

Specifically, the Commission adopted a combustion process adjustment requirement for individual pieces of combustion equipment at major sources of NO_x in Section XVI.D., expanding on work practices currently required in federal NESHAP. The combustion process adjustment was modeled after NESHAP DDDDD, which applies to boilers and process heaters at major HAP sources, and NESHAP ZZZZ, which establishes various requirements for stationary reciprocating internal combustion engines. Section XVI.D. is intended to apply to some equipment that is not subject to work practices under the NESHAPs (e.g., natural gas fired boilers at area sources of HAPs) that have uncontrolled actual NO_x emissions (annual emission rate corresponding to the annual process rate listed on the Air Pollutant Emission Notice without consideration of any emission control equipment or procedures) equal to or greater than 5 tpy. The Commission intended major NO_x sources to use the most recent APEN submitted to the Division as of January 1, 2017, to determine whether the combustion equipment is subject to the requirement to conduct an initial combustion process adjustment by April 1, 2017, or alternatively document reliance on an allowed, alternative adjustment. Subsequent determinations will be based on the most recent APEN submitted to the Division as of the year the combustion equipment may be subject to the combustion process adjustment requirements (e.g., most recent APEN submitted to the Division as of January 1, 2018, to determine whether a combustion process adjustment is required in 2018). In addition to the specific adjustment requirements, the Commission intended owners and operators to operate and maintain subject equipment consistent with manufacturer specifications or best combustion engineering practices.

The Commission also established RACT requirements for emission points at major sources of VOC or NO_x in the DMNFR area in Section XIX. In Section XIX.A., the Commission listed all major sources of VOC or NO_x at the time of adoption of the Moderate nonattainment area RACT SIP. The Commission determined that not all emission points above permitting thresholds at major sources were necessarily subject to existing regulatory RACT requirements in Regulation Number 7 or federally enforceable emission limits in Colorado's Regional Haze SIP. Therefore, in Sections XIX.C. through XIX.G., the Commission incorporated federal NSPS or NESHAP requirements, including monitoring, recordkeeping, and reporting requirements, for some sources to further satisfy Colorado's RACT obligation for Colorado's major VOC and NO_x sources. The Commission acknowledges concerns over potential EPA revisions to NSPS and NESHAP incorporated by reference in Sections XIX.C. through XIX.G., and intended that sources comply with applicable requirements in the most up-to-date version of the federal rule, or alternative requirements approved by EPA in accordance with the NSPS or NESHAP. The Commission also directs the Division to initiate efforts to update the incorporation by reference in the SIP, as necessary and with all due diligence. Sources identified in Section XIX.A. but not specifically included in Sections XIX.B. through XIX.G., were determined to be subject to other, existing regulatory RACT requirements in Colorado's SIP (see the Moderate ozone SIP revision, RACT Chapter 6 and the Technical Support Document for Reasonably Available Control Technology for Major Sources for additional detail). Concerning major sources or source emission points not subject to other, existing regulatory RACT requirements in Colorado's SIP or specified in Sections XIX.C. through XIX.G., the Commission required owners or operators to submit RACT analyses for the facility or specific emission points to the Division by December 31, 2017. The RACT analyses should identify potential options to reduce NO_x and/or VOC emissions from the facility or emission point(s), propose RACT for that facility or point, propose associated monitoring, propose a schedule for implementation, and include economic and technical information showing why the RACT proposal is RACT for the particular facility or point. These RACT analyses are not to be limited by a January 1, 2017, implementation date.

CoorsTek submitted a permit application to limit permitted emissions of VOC below 100 tpy. Metro Wastewater Reclamation District submitted an application for minor modification to its Title V permit to correct inconsistencies and remove obsolete limits, which lowered the combined Metro Wastewater/Suez Denver Metro permitted NO_x emission limit below 100 tpy. Consequently, the Commission determined that the facilities no longer met the definition of a major source, and therefore were not included in Section XIX. Should either source fail to obtain such federally enforceable permits by July 1, 2018, the Commission directs the Division, with all due diligence, to initiate efforts to establish RACT requirements for that source in Colorado's ozone SIP.

Current SIP review

In 2009, the Commission submitted revisions to Regulation Number 7, Section XII. to EPA related to the 1997 ozone NAAQS attainment plan. In 2011, EPA approved the attainment demonstration but disapproved portions of the Regulation Number 7 revisions. In 2013, the Commission submitted revisions to Regulation Number 7, Section XII. to EPA to address EPA's disapproval. During the review of the 2013 submittal, EPA noted additional concerns with the monitoring, recordkeeping, and reporting requirements for natural gas processing plants and glycol natural gas dehydrators, as well as other concerns unrelated to the attainment demonstration for the SIP revision required following the reclassification of the DMNFR area to Moderate.

Natural gas processing plants

Regulation Number 7, Section XII.G.1. identifies a leak detection and repair ("LDAR") program applicable to natural gas processing plants. This "LDAR program" includes all applicable requirements in NSPS KKK. EPA has promulgated new LDAR programs for natural gas processing plants in NSPS OOOO and NSPS OOOOa. Therefore, the Commission updated references to applicable federal NSPS (i.e., NSPS OOOO and NSPS OOOOa) monitoring, recordkeeping, and reporting requirements for natural gas processing plants in the SIP.

Glycol natural gas dehydrators

Regulation Number 7, Section XII.H. already includes a 90% control requirement for glycol natural gas dehydrators. This is a SIP requirement. During the review of the 2013 submittal, EPA noted practical enforceability concerns with the monitoring, recordkeeping, and reporting requirements for glycol natural gas dehydrators. Therefore, the Commission added monitoring, recordkeeping, and reporting requirements for glycol natural gas dehydrators in the SIP to address EPA's concerns with ensuring compliance with the control requirement. The Commission based these requirements off of the Division's glycol natural gas dehydrator Operation and Maintenance Plan template to align the Section XII.H. monitoring, recordkeeping, and reporting requirements with the Operation and Maintenance Plan template, where possible. For any glycol dehydration system monitoring, recordkeeping and reporting requirement adopted for inclusion in the SIP during this hearing that conflicts with a similar provision in a Division approved Operation and Maintenance Plan, the Commission intends that sources only have to comply with the provision adopted for inclusion in the SIP and not the competing requirement in the approved Operation and Maintenance Plan. Further, the Commission directs the Division to work with industry to revise the Division's glycol dehydration systems Operating and Maintenance Plan template to remove requirements that are duplicative of the Section XII.H. monitoring, recordkeeping, and reporting requirements, to alleviate competing requirements with Section XII.H., as necessary.

EPA requested revisions

EPA also noted concerns with other previously submitted provisions in Section XII. EPA requested minor changes to Section XII.C.1.c., and a reversion to previously approved SIP language in Sections XII.C.1.d. and XIII.E.3.a. to address concerns with discretionary language. In response, the Commission revised Section XII.C.1.c. and reverted to previously approved SIP language in Sections XII.C.1.d. and XII.E.3.a., as requested by EPA.

Incorporation by Reference in Section XIX

§ 24-4-103(12.5) of the Colorado Administrative Procedure Act allows the Commission to incorporate by reference federal regulations. The criteria of §24-4-103(12.5) are met by including specific information, making the regulations available and because repeating the full text of each of the federal regulations incorporated would be unduly cumbersome and inexpedient. However, these regulations are included in the SIP in order to establish RACT, which must be included in the SIP to satisfy CAA Sections 172(c) and 182(b). Therefore, in order to comply with Part D of the CAA, the Commission has incorporated federal regulations in Section XIX.C through H by reference.

Additional Considerations

Colorado must revise Colorado's ozone SIP to address the ozone Moderate nonattainment area requirements. The CAA does not expressly address all of the provisions adopted by the Commission. Rather, federal law establishes the 8-hour ozone NAAQS and requires Colorado to develop a SIP adequate to attain the NAAQS. Therefore, the Commission adopted certain revisions to Regulation Number 7 to ensure attainment with the 2008 8-hour ozone NAAQS and satisfy Colorado's Moderate nonattainment area obligations, including those related to RACT. The Commission also adopted revisions to Regulation Number 7 to address EPA concerns that are unrelated to the reclassification to Moderate. These revisions do not exceed or differ from the federal act due to state flexibility in developing nonattainment area SIPs; however, in accordance with C.R.S. § 25-7-110.5(5)(b), the Commission nonetheless determines:

- (I) The revisions to Regulation Number 7 address combustion device auto-igniters, condensate storage tank inspections, and glycol natural gas dehydrators at oil and gas facilities and equipment leaks at natural gas processing plants. NSPS OOOO, NSPS OOOOa, NSPS Kb, NSPS KKK, NESHAP HH, and NESHAP HHH may also apply to such oil and gas facilities. However, the Regulation Number 7 revisions apply on a broader basis to more storage tanks and glycol natural gas dehydrators. For example, Regulation Number 7 addresses more glycol natural gas dehydrators than the major source provisions of NESHAP HH and HHH as well as more glycol natural gas dehydrators than the area source provisions of NESHAP HH, which are limited to tri ethylene glycol ("TEG") dehydrators. The Commission revised Regulation Number 7 to include glycol natural gas dehydrator monitoring, recordkeeping, and reporting requirements to ensure compliance with the current 90% system-wide control requirement in Section XII.D.

Similarly, Regulation Number 7 addresses more storage tanks than the major source provisions of NESHAP HH, as well as NSPS Kb, which exempt certain storage vessels storing condensate or petroleum prior to custody transfer. Regulation Number 7 also addresses a broader set of storage tanks than NSPS OOOO and NSPS OOOOa, which address only those storage tanks with emissions greater than 6 tpy controlled actual emissions (i.e., 120 tpy uncontrolled actual emissions) and do not require auto-igniters on combustion devices. The Commission revised Regulation Number 7 to include the auto-igniter and condensate storage tank AVO inspections in Colorado's SIP to strengthen Colorado's SIP and support Colorado's 2017 emissions inventory. In addition, Regulation Number 7 addresses more equipment leaks at natural gas processing plants than NSPS KKK, which only applies to natural gas processing plants constructed, reconstructed, or modified after January 20, 1984. The Commission revised Regulation Number 7 to reference the more recent equipment leak detection and repair requirements in NSPS OOOO and NSPS OOOOa.

The revisions to Regulation Number 7 also address RACT requirements for lithographic and letterpress printing, industrial cleaning solvents, and major sources of VOC and NO_x in Colorado's ozone nonattainment area. EPA published CTGs for lithographic and letterpress printing and industrial cleaning solvents in 2006. The Commission revised Regulation Number 7 to include regulatory RACT requirements for these VOC source categories. Colorado's major sources of VOC and NO_x are subject to various and numerous NSPS or NESHAP, Regulation Number 7 RACT requirements, or RACT/beyond RACT analyses. The Commission revised Regulation Number 7 to include regulatory RACT requirements for Colorado's major sources of VOC and NO_x in the SIP. Specifically, the Commission revised Regulation Number 7, Sections XVI. and XIX. to include source specific regulatory RACT requirements and a combustion process adjustment for combustion equipment at major sources of NO_x. MACT DDDDD, MACT JJJJJJ, MACT ZZZZ, MACT YYYYY, NSPS GG, NSPS KKKK, NSPS IIII, and NSPS JJJJ may apply to such combustion equipment. However, the Regulation Number 7 revisions apply on a broader basis to more combustion equipment.

- (II) The federal rules discussed in (I), are primarily technology-based in that they largely prescribe the use of specific technologies in order to comply. EPA has provided some flexibility in NSPS OOOO and NSPS OOOOa by allowing a storage vessel to avoid being subject to NSPS OOOO if the storage vessel is subject to any state, federal, or local requirement that brings the storage vessel's emissions below the NSPS OOOO threshold.
- (III) The CAA establishes the 8-hour ozone NAAQS and requires Colorado to develop SIP revisions that will ensure attainment of the NAAQS. The ozone NAAQS was not determined taking into account concerns unique to Colorado. In addition, Colorado cannot rely exclusively on a federally enforceable permit or federally enforceable NSPS or NESHAP to satisfy Colorado's Moderate nonattainment area RACT obligations. Instead, Colorado can adopt applicable provisions into its SIP directly, as the Commission has done here.
- (IV) Colorado will be required to comply with a lower ozone NAAQS in the near future. These current revisions may improve the ability of the regulated community to comply with new requirements needed to attain the lower NAAQS insofar as RACT analyses and efforts conducted to support the revisions adopted by the Commission may prevent or reduce the need to conduct additional RACT analyses for the more stringent NAAQS.
- (V) EPA has established a January 1, 2017, deadline for this SIP submission. There is no timing issue that might justify changing the time frame for implementation of federal requirements.
- (VI) The revisions to Regulation Number 7 Section XII. strengthen Colorado's SIP, which currently addresses emissions from the oil and gas sector in a cost-effective manner, allowing for continued growth of Colorado's oil and gas industry. The revisions to Regulation Number 7 Sections X. and XIII. recognize products and practices currently utilized by printing and industrial cleaning solvent operations. The revisions to Regulation Number 7 Sections XVI. and XIX. are also specific to existing emission points at major sources of VOC and NO_x, allowing for continued growth at Colorado's major sources.
- (VII) The revisions to Regulation Number 7 Section XII. establish reasonable equity for oil and gas owners and operators subject to these rules by providing the same standards for similarly situated and sized sources. The revisions to Regulation Number 7 Sections X., XIII., and XVI. similarly establish the categorical RACT requirements for similarly situated and sized sources. Where a source is not subject to a categorical RACT requirement, RACT is, by its nature, determined on a case-by-case basis.

- (VIII) If Colorado does not attain the 2008 ozone NAAQS by July 20, 2018, EPA will likely reclassify Colorado as a serious ozone nonattainment area, which automatically reduces the major source thresholds from 100 tons per year of VOC and NO_x to 50 tons per year; thus subjecting more sources to major source requirements. If EPA does not approve Colorado's SIP, EPA may promulgate a Federal Implementation Plan; thus potentially determining RACT for Colorado's sources. Either of these outcomes may subject others to increased costs.
- (IX) Where necessary, the revisions to Regulation Number 7 include minimal monitoring, recordkeeping, and reporting requirements that correlate, where possible, to similar federal or state requirements.
- (X) Demonstrated technology is available to comply with the revisions to Regulation Number 7. Some of the revisions expand upon requirements already applicable, such as the requirements for auto-igniters, condensate storage tank inspections, and equipment leaks at natural gas processing plants. Other revisions reflect changes in industry practice and market forces, such as the VOC content of printing materials and cleaning solvents. Similarly, the revisions concerning major sources of VOC and NO_x generally reflect current emission controls and work practices.
- (XI) As set forth in the Economic Impact Analysis, the revisions to Regulation Number 7 contribute to the prevention of ozone in a cost-effective manner.
- (XII) Alternative rules could also provide reductions in ozone and help to attain the NAAQS. The Commission determined that the Division's proposal was reasonable and cost-effective. However, a no action alternative would very likely result in an unapprovable SIP.

As part of adopting the revisions to Regulation Number 7, the Commission has taken into consideration each of the factors set forth in C.R.S. § 25-7-109(1)(b).

Colorado must revise Colorado's ozone SIP to address the Moderate Nonattainment area requirements. However, to the extent that C.R.S. § 25-7-110.8 requirements apply to this rulemaking, and after considering all the information in the record, the Commission hereby makes the determination that:

- (I) These rules are based upon reasonably available, validated, reviewed, and sound scientific methodologies, and the Commission has considered all information submitted by interested parties.
- (II) Evidence in the record supports the finding that the rules shall result in a demonstrable reduction of the ozone precursors VOC and NO_x.
- (III) Evidence in the record supports the finding that the rules shall bring about reductions in risks to human health and the environment that justify the costs to implement and comply with the rules.
- (IV) The rules are the most cost-effective to achieve the necessary and desired results, provide the regulated community flexibility, and achieve the necessary reduction in air pollution.
- (V) The selected regulatory alternative will maximize the air quality benefits of regulation in the most cost-effective manner.

P. November 16, 2017 (Revisions to Section II., XII., Section XVII., and Section XVIII.)

This Statement of Basis, Specific Statutory Authority, and Purpose complies with the requirements of the Colorado Administrative Procedure Act §§ 24-4-103, C.R.S. and the Colorado Air Pollution Prevention and Control Act §§ 25-7-110 and 25-7-110.5, C.R.S. ("the Act").

Basis

On May 4, 2016, the U.S. Environmental Protection Agency's ("EPA") published a final rule that determined that Colorado's Marginal ozone nonattainment area failed to attain the 2008 8-hour Ozone National Ambient Air Quality Standard ("NAAQS"). EPA, therefore, reclassified the Denver Metro North Front Range ("DMNFR") area to Moderate and required attainment of the NAAQS no later than July 20, 2018, based on 2015-2017 ozone data.

As a result of the reclassification, on May 31, 2017, Colorado submitted to EPA revisions to its State Implementation Plan ("SIP") to address the Clean Air Act's ("CAA") Moderate nonattainment area requirements, as set forth in CAA § 182(b) and the final SIP Requirements Rule for the 2008 Ozone NAAQS (See 80 Fed. Reg. 12264 (March 6, 2015)). As a Moderate nonattainment area, Colorado must revise its SIP to include Reasonably Available Control Technology ("RACT") requirements for each category of volatile organic compound ("VOC") sources covered by a Control Technique Guideline ("CTG") for which Colorado has sources in the DMNFR that EPA finalized prior to a nonattainment area's attainment date. EPA finalized the Control Techniques Guidelines for the Oil and Natural Gas Industry ("Oil and Gas CTG") on October 27, 2016, with a state SIP submittal deadline of October 27, 2018. Given this timing, the November 2016, SIP revisions did not include RACT for the oil and natural gas source category and Colorado must further revise its SIP.

The Oil and Gas CTG recommends controls that are presumptively approvable as RACT and provide guidance to states in developing RACT for their specific sources. In many cases, Colorado has similar, or more stringent, regulations comparable to the recommendations in the Oil and Gas CTG, though many of these provisions are not currently in Colorado's Ozone SIP. Therefore, the Commission is adopting RACT for the oil and gas sources covered by the Oil and Gas CTG (CTG as of October 27, 2016) into the Ozone SIP (Sections XII. and XVIII.). In order to make additional progress towards attainment of the NAAQS, the Commission is also adopting State Only revisions to require owners or operators of natural gas-driven pneumatic controllers in the DMNFR area to inspect and maintain pneumatic controllers. Further, the Commission is making clarifying revisions and typographical, grammatical, and formatting corrections throughout Regulation Number 7.

Specific Statutory Authority

§ 25-7-105(1) of the Act directs the Commission to promulgate such rules and regulations as are consistent with the legislative declaration set forth in § 25-7-102 and are necessary for the proper implementation and administration of the Act. The Act broadly defines air pollutant and provides the Commission broad authority to regulate air pollutants. § 25-7-301 directs the Commission to develop a program providing for the attainment and maintenance of each national ambient air quality standard in each nonattainment area of the state. § 25-7-106 provides the Commission maximum flexibility in developing an effective air quality program and promulgating such combination of regulations as may be necessary or desirable to carry out that program. § 25-7-106 also authorizes the Commission to promulgate emission control regulations applicable to the entire state, specified areas or zones, or a specified class of pollution. §§ 25-7-109(1)(a), (2), and (3) of the Act authorize the Commission to promulgate regulations requiring effective and practical air pollution controls for significant sources and categories of sources, emission control regulations pertaining to nitrogen oxides and hydrocarbons, and emissions control regulations pertaining to the storage and transfer of petroleum products and other VOCs. § 25-7-109(2)(c), in particular, provides the Commission broad authority to regulate hydrocarbons.

Purpose

As discussed, Colorado must adopt RACT into its Ozone SIP for sources covered by the Oil and Gas CTG. While the Oil and Gas CTG recommends presumptive RACT, it does allow states the flexibility to determine what constitutes RACT for the state's covered sources. Further, while EPA's Oil and Gas CTG implementation memorandum provides guidance that the emission controls determined by the state to be RACT for the sources covered by the Oil and Gas CTG must be implemented as soon as practicable but in no case later than January 1, 2021, states also have the flexibility to determine the appropriate implementation timeframe for the sources within the state's ozone nonattainment area. The Commission determined that some of Colorado's existing regulations (*i.e.*, the "system-wide" control program for condensate tanks in Section XII.D.2.) achieve greater emission reductions than the RACT recommended by the Oil and Gas CTG. The Commission determined that some sources covered by the Oil and Gas CTG were not addressed in existing regulations (*i.e.*, pneumatic pumps).

The Commission also determined that some sources addressed in the Oil and Gas CTG (*i.e.*, components at well production facilities and natural gas compressor stations, compressors, pneumatic controllers) are already subject to existing regulations that were not yet part of Colorado's Ozone SIP. The Commission adopted many of these rules in 2014, and intends to preserve the substance of these rules, where possible, in moving them into the Ozone SIP, while making a few adjustments and improvements in response to recommendations in the Oil and Gas CTG. The Commission also adopted correlating revisions to the applicability provisions of Sections II. and XII.

The Commission relied on existing regulations in the Ozone SIP for RACT for condensate storage tank controls to satisfy Colorado's obligation to address storage vessels under the Oil and Gas CTG. The Commission adopted requirements for pneumatic pumps in Section XII. to address recommendations in the Oil and Gas CTG. The Commission revised the existing SIP requirements in Section XII.G. for equipment leaks at natural gas processing plants to address recommendations in the Oil and Gas CTG. The Commission duplicated into the Ozone SIP from Section XVII. provisions for compressors and leak detection and repair ("LDAR") for components at well production facilities and natural gas compressor stations. The Commission adjusted these LDAR requirements to address recommendations in the Oil and Gas CTG, along with updates to the recordkeeping and reporting requirements. Corresponding revisions to the LDAR program in Section XVII. are made on a State Only basis. The Commission also revised Section XVIII. to include existing State Only requirements for continuous bleed, natural gas-driven pneumatic controllers in the Ozone SIP and specify that continuous bleed, natural gas-driven pneumatic controllers located at natural gas processing plants maintain a natural gas bleed rate of zero scfh.

The Commission adopted State Only provisions for the inspection and maintenance of natural gas-driven pneumatic controllers in Section XVIII.

The Commission also made clarifying revisions and corrected typographical, grammatical, and formatting errors found within the regulation.

The following explanations provide further insight into the Commission's intention for certain revisions and, where appropriate, the technological or scientific rationale for the revision.

Oil and Gas CTG, generally

The Oil and Gas CTG provides recommendations for states to consider in determining RACT for certain oil and natural gas industry emission sources. EPA included storage vessels, pneumatic controllers, pneumatic pumps, compressors, equipment leaks, and fugitive emissions in the Oil and Gas CTG because EPA determined that these sources are significant sources of VOC emissions. EPA defines RACT as "the lowest emission limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility." States may implement approaches that differ from the recommendations in the Oil and Gas CTG so long as they are consistent with the CAA, EPA's implementing regulations, and policies on interpreting RACT.

Applicability to hydrocarbons (Section II.B.)

Section II.B. currently exempts negligibly reactive volatile organic compounds, such as methane and ethane, from requirements of the SIP, while making hydrocarbon emissions, including methane and ethane, subject to State Only regulation under Sections XVII. and XVIII. Section XVII. sets a threshold for leaks requiring repair that is based on the concentration of hydrocarbons, as determined using EPA Method 21. Section XII.L. applies the same EPA Method 21 hydrocarbon threshold for leaks requiring repair. The Commission revised Section II.B. to clarify that the Section XII.L. hydrocarbon threshold and Section XVIII. natural gas emission standards serve only as VOC indicators and the SIP does not regulate hydrocarbon emissions.

The continuous bleed, natural gas-driven pneumatic controller requirements in Section XVIII. reduce natural gas emissions, which consists of other pollutants in addition to VOCs. Despite the presence of other constituents, natural gas is principally methane and the Commission intends to regulate emissions of natural gas as hydrocarbons, including methane and ethane, on a State Only basis as described in Sections II.B. and XVIII. The Oil and Gas CTG also utilizes a natural gas bleed rate standard for continuous bleed pneumatic controllers and the Oil and Gas CTG LDAR program employs a methane-based threshold for EPA Method 21 leak detection. Therefore, these revisions are consistent with the Oil and Gas CTG and the CAA.

While the revisions to Sections XII. and XVIII. to include provisions in Colorado's Ozone SIP are limited to the DMNFR, the Commission acknowledges the importance of reducing hydrocarbon emissions from the oil and gas sector (*i.e.*, upstream, midstream, and transmission) statewide. Therefore, without prescribing any particular outcome, the Commission directs the Division to initiate and lead a stakeholder process over the 2018-2019 timeframe to evaluate potential areas for cost-effective hydrocarbon emission reductions. Stakeholders will nominate topics for evaluation, which may include, but are not limited to, the frequency of LDAR inspections, transmission segment compressor emissions, natural gas-driven and zero emission pneumatic controllers outside the DMNFR (to be informed by the pneumatic study and inspection program), and potential expansion of the requirements adopted in the DMNFR as part of this rulemaking. The Division will brief the Commission on the stakeholder process in January 2019 and present recommendations for any new proposals for emission reductions by no later than January 2020. The Commission intends that one representative of industry, local government, and the environmental community each will have the opportunity to speak during the briefings.

Applicability of Section XII. (Section XII.A.)

The Commission is clarifying the applicability of Section XII. Historically, Section XII. has applied to operations that involve the collection, storage, or handling of condensate in the DMNFR. While this remains the case, the requirements in Section XII.J. for compressors, Section XII.K. for pneumatic pumps, and Section XII.L. for components at well production facilities and natural gas compressor stations also apply to those facilities and equipment collecting, storing, or handling other hydrocarbon liquids.

Section XII.A.5. further provides that subject well production facilities are those with uncontrolled actual VOC emissions greater than or equal to one ton per year ("tpy"). This applicability threshold addresses the Oil and Gas CTG's recommended barrels of oil equivalent ("BOE") exemption. EPA crafted the BOE exemption believing that well production facilities with an average production less than 15 BOE per well per day were inherently low emitting facilities. EPA later determined that information submitted on the draft CTG and proposed NSPS OOOOa did not support this conclusion. Therefore, in addition to the complications concerning tracking BOE, the Commission chose to rely upon an uncontrolled actual VOC tpy threshold for well production facility applicability. The use of a tpy threshold is also consistent with Colorado's current air pollutant reporting and permitting thresholds. Further, Section XII.A. historically exempted from the requirements of Section XII. those operations reflecting a total of less than 30 tons-per-year of actual uncontrolled emissions of VOCs in the DMNFR area. That exemption continues to apply to Sections XII.B. through XII.I., but is not extended to Sections XII.J., XII.K., and XII.L.

Definitions (Sections XII.B. and XVII.A.)

The Commission is adopting definitions into Section XII.B., most of which are consistent with the existing definitions of Section XVII. In the definition of “component”, the Commission is clarifying both in Section XII.B. and in Section XVII.A., that thief hatches and other openings on storage tanks are included in the definition as a pressure relief device. This revision clarifies that leaks can occur from the thief hatch (e.g., faulty or dirty seals) that are different than vented emissions under the standard in Section XVII.C.2.a., and that such leaks are subject to the LDAR program. The Commission anticipates that emissions from storage tanks identified as leaks requiring repair through the LDAR inspections under Sections XII.L. or XVIII.F. will be recorded and reported as leaks starting in 2018 for the 2019 annual report. The Commission is adding a definition of “custody transfer” that applies to custody transfers of both natural gas and oil products. The Commission is also adding definitions for “natural gas driven diaphragm pump” and “natural gas processing plant” that correspond to federal definitions.

Operate without venting clarification (Section XVII.C.2.a.)

The Commission is providing additional detail concerning provisions adopted in 2014 that established an “operate without venting” standard for storage tanks. In response to industry concern that Section XVII. does not sufficiently define “venting” or delineate “venting” from “leaking,” the Commission is adopting provisions clarifying which emissions from storage tanks are considered “venting”. Section XVII.F. defines “leaking” in terms of infra-red camera or EPA Method 21 inspections of components. While storage tanks may also have leaks, as the Commission recognizes by including thief hatches or other openings on storage tanks in the definition of component, the Commission now further clarifies the “venting” standard by specifying that “venting” is emissions that are primarily the result of over-pressurization or that are from an open or visibly unseated pressure relief device (e.g., thief hatch). The Commission intends that “visibly unseated” means visible from the outside of the pressure relief device and does not require an owner or operator to open a pressure relief device to determine if the seal is proper. The Commission also authorizes the Division to request a demonstration from the owner or operator that “venting” emissions observed by the Division were not primarily the result of over-pressurization. The Commission intends that such demonstration request allow an owner or operator to provide case specific information or other sufficient details that the design, operation, and maintenance of the facility is adequate to prevent over-pressurization. In clarifying a difference between “leaking” and “venting,” the Commission does not prohibit component leaks, per se, so long as leaks are repaired under the applicable repair time frames but does continue to prohibit “venting” from storage tanks.

Ozone season clarification (Sections XII.F.4. and XII.H.6.)

In October 2015, the EPA finalized a revision to the ozone NAAQS. (80 Fed. Reg. 65292 (Oct. 26, 2015)). In publishing its final rule, the EPA revised the length of Colorado's ozone season. Colorado's ozone season is now year-round, rather than the months of May through September. The Commission therefore revised references to “ozone season” in Sections XII.F.4. and XII.H.6. to reflect that the requirements now apply during the months of May to September. There are no substantive changes to the underlying requirements resulting from this revision.

Equipment leaks at natural gas processing plants (Section XII.G.)

The Commission is updating the LDAR program applicable to equipment leaks at natural gas processing plants in the DMNFR by requiring owners or operators to comply with 40 C.F.R. Part 60 (NSPS), Subparts OOOO or OOOOa instead of complying with NSPS Subpart KKK, which is an earlier NSPS and less stringent. Subpart KKK requires sources to implement a NSPS Subpart VV level LDAR program, while Subpart OOOO requires sources to implement a NSPS Subpart VVa level LDAR program. A Subpart VVa level LDAR program is recommended for equipment at natural gas processing plants in the Oil and Gas CTG. The Commission determined that a 2019 implementation date would provide owners and operators of existing natural gas processing plants a reasonable period of time to establish and obtain the necessary resources to transition from Subpart KKK to Subpart OOOO LDAR requirements.

Compressors (Section XII.J.)

The Commission is adopting the centrifugal and reciprocating compressor provisions from existing Section XVII.B.3. into new Section XII.J. in order to include the requirements in Colorado's Ozone SIP. The Commission is expanding the existing reciprocating compressor requirements to reciprocating compressors located at natural gas processing plants to address recommendations in the Oil and Gas CTG. Owners or operators of existing reciprocating compressors at natural gas processing plants must begin monitoring the reciprocating compressor hours of operation on January 1, 2018, starting at zero, in relation to the rod packing replacement requirement, conduct the first rod packing replacement prior to January 1, 2021, or route emissions to a process beginning May 1, 2018.

The Commission intends to allow owners or operators the option to reduce VOC emissions by routing centrifugal compressor emissions to a process or control and reciprocating compressor emissions to a process, consistent with the recommendations in the Oil and Gas CTG. With respect to centrifugal compressors, the Oil and Gas CTG and related federal requirements reveal that "process" generally refers to routing emissions via a closed vent system to any enclosed portion of a process unit (e.g., compressor or fuel gas system) where the emissions are predominantly recycled, consumed in the same manner as a material that fulfills the same function in the process, transformed by chemical reaction into materials that are not regulated materials, incorporated into a product, or recovered. Similarly, with respect to reciprocating compressors, routing to a process includes using a rod packing emissions collection system that operates under negative pressure and meets cover and closed vent system requirements. The negative pressure requirement ensures that all emissions are conveyed to the process and avoids inducing back pressure on the rod packing and resultant safety concerns. The Commission recognizes that there may be a distinction between air pollution control equipment and process equipment (see e.g., U.S. EPA Letter to Timothy J. Mohin RE: Criteria for Determining Whether Equipment is Air Pollution Control Equipment or Process Equipment (Nov. 27, 1995)). For example, as noted in the Oil and Gas CTG, vapor recovery units and flow lines that "route emissions to a process" may be considered part of the process and not a control device, however, a related cover and closed vent system, if present, are still subject to applicable requirements. Further, components (as defined in these rules) located within a process or that are part of process equipment are subject to the Section XII.L. LDAR requirements. The Commission intends that owners or operators will follow similar procedures when complying with centrifugal and reciprocating compressor requirements in Section XII.J.

The Commission has adopted an inspection program for compressors, but also intends to provide owners or operators with the alternative of complying with other requirements, including the LDAR program adopted into Section XII.L. While the requirements of the LDAR program would replace the annual visual inspections and EPA Method 21 inspections of the cover and closed vent systems for defects and leaks, owners or operators would still need to conduct monthly inspections of their combustion devices. Compliance with the LDAR program is not limited to the inspection frequency and methods specified therein; owners or operators will also need to maintain records of the inspections and submit reports to the Division, consistent with the requirements of the LDAR program. The Commission has specified an inspection and repair schedule for compressors, but has recognized that there may be reasons that a system is unsafe or difficult to inspect, or where a repair may not be feasible. Owners or operators will need to maintain records of each cover or closed vent system that is unsafe or difficult to inspect and schedule for inspection when circumstances allow. Similarly, when a repair is infeasible, insofar as it would require a shutdown of the equipment, repair can be delayed until the next scheduled shutdown but must be completed within two years after discovery. The Commission expects owners or operators to attempt to confirm repair before starting up operation after shutdown, to the extent practicable. The Commission also expects that if the repair attempt can be made during an unplanned shutdown, it will be.

The Commission adopts the monitoring and recordkeeping requirements to ensure and demonstrate compliance with the control requirements. As an alternative to complying with the control, monitoring, and recordkeeping requirements in Section XII.J., owners or operators may instead comply with centrifugal or reciprocating compressor control, monitoring, recordkeeping, and reporting requirements in a NSPS, including Subparts OOOO, OOOOa, or future standards.

Natural gas driven diaphragm pumps (Section XII.K.)

The Oil and Gas CTG contains recommendations for RACT for natural gas-driven diaphragm pumps. The Commission has not previously adopted regulations specifically directed at this type of equipment, and does so in Section XII.K.

The Oil and Gas CTG recommends that the pumps located at a natural gas processing plant have zero VOC emissions. The Oil and Gas CTG also recommends that owners or operators of pumps located at well sites route VOC emissions from the pneumatic pump to an onsite control device or process, unless the pneumatic pump operates on fewer than 90 days or an engineering assessment shows that routing the pneumatic pump emissions to a control device or process is technically infeasible. The assessment of technical feasibility may include safety considerations, distance from the control device, pressure losses and differentials in the closed vent system, gas pressure, and the capacity of the control device, among other things. The Commission acknowledges that RACT, by EPA definition, includes both technological and economic feasibility elements. The Commission determined that the cost of routing pneumatic pump emissions to an existing control device or process is reasonable and is, therefore, only providing an exemption from the emission control requirement based on technical infeasibility. However, the Commission does not intend to limit future RACT determinations due to limiting the pneumatic pump infeasibility analysis to technical ability. In addition, the 90-day exemption for pumps was included to address intermittently used or portable pumps. Consistent with the Oil and Gas CTG, the Commission intends that if a pump operates on any period of a calendar day, that day would be included in the calculation for applicability of the 90-day exemption.

The Commission does not expect an owner or operator to install new equipment specifically to route pneumatic pump emissions to a control or process but intends that when an owner or operator subsequently otherwise installs a control device or it becomes technically feasible to route pump emissions to a process, then the owner or operator will capture the emissions from the pneumatic pump and route the emissions to the newly installed control device or feasible process. Routing to a control or process generally refers to routing the emissions through a closed vent system to a vapor recovery unit, combustion device, or enclosed portion of a process where emissions are recycled and/or consumed.

The Commission has applied the same flexibility for pneumatic pumps as it has for compressors; owners or operators may comply with the inspection requirements in Section XII.K. or may follow the LDAR program in Section XII.L. Also similar to compressors, owners or operators may delay subsequent repair attempts of equipment where, during a scheduled shutdown, the owner or operator unsuccessfully repaired the leak or equipment requiring repair so long as repair is completed within two years after discovery. As with compressors, the Commission expects owners or operators to attempt to confirm repair before starting up operation after a shutdown and make an attempt to repair during unscheduled shutdowns, to the extent practicable.

As an alternative to complying with the control, monitoring, recordkeeping, and reporting requirements in Section XII.K., owners or operators may instead comply with pneumatic pump emission control, monitoring, recordkeeping, and reporting requirements in a NSPS, including Subparts OOOO, OOOOa, or future standards.

Fugitive emissions at well production facilities and natural gas compressor stations (Section XII.L.)

The Oil and Gas CTG recommends LDAR programs at well sites (*i.e.*, well production facilities) and gathering and boosting stations (*i.e.*, natural gas compressor stations), including inspection frequencies, recordkeeping, and reporting. The Commission established Colorado's well production facility and natural gas compressor station LDAR program in 2014 in Section XVII.F., which is not part of the Ozone SIP. In creating a LDAR program in the Ozone SIP, the Commission intends to maintain as much of the current program as feasible. Where the Commission adopted revisions in Section XII.L. that differ from language currently found in the State Only LDAR program, the Commission in most cases made the same or similar revisions to the corresponding provisions in Section XVII.F.

Inspection, repair, and remonitoring

The Oil and Gas CTG recommends LDAR inspections at a minimum quarterly frequency for gathering and boosting stations and a minimum semi-annual frequency for well sites. The Commission is adopting inspection frequencies to address those recommendations in Section XII.L. The Commission is not modifying the LDAR schedules in Section XVII.F. The Commission intends that for those sources required by Section XVII.F. to conduct more frequent LDAR monitoring than specified in Section XII.L., the owner or operator may comply with Sections XII L.1. and XII.L.2. by complying with Sections XVII.F.3. and XVII.F.4. As with the LDAR inspection frequency in Section XVII.F., the Commission expects that owners or operators will ensure that inspections are appropriately spaced on the frequency schedules (e.g., quarterly inspections will occur every three months but not, for example, on March 31 and April 1).

The Oil and Gas CTG does not recommend a semi-annual LDAR inspection frequency at well sites with a gas to oil ratio less than 300 and which produce, on average, less than or equal to 15 BOE per well per day. The Commission recognizes that a component of RACT is balancing the emission reductions with the cost of the controls, and agrees that there should be a floor below which the recommended minimum frequency does not apply. The Commission determined a threshold of one tpy VOC emissions addresses this balance and the recommendation in the Oil and Gas CTG. Adopting an emissions based threshold maintains consistency with the current Regulation Number 7 applicability program and promotes the clarity and effectiveness of the regulation.

The Commission determined that annual LDAR inspections of well production facilities with uncontrolled actual VOC emissions greater than or equal to one tpy and equal to or less than six tpy and semi-annual LDAR inspections of well production facilities with uncontrolled actual VOC emissions greater than six tpy address the Oil and Gas CTG's recommendations.

The Commission understands that the revised inspection frequencies will result in a significant number of new inspections. However, annual LDAR inspections of well production facilities with uncontrolled actual VOC emissions greater than or equal to one tpy and equal to or less than six tpy will be less burdensome than semi-annual inspections. The Commission has determined that the emission reductions achieved by this program will improve the ability of the DMNFR area to attain the ozone standard and are cost-effective. While the rule specifies that the new inspection frequencies begin to apply as of June 30, 2018, the rule does not require that the first periodic inspection be completed by June 30, 2018. The Commission also does not require that monitoring be conducted in advance of this date; however, inspections done after January 1, 2018, that are in addition to current required LDAR monitoring frequencies may count towards the first annual or semi-annual inspection, or inspections done in the previous quarter at natural gas compressor stations. The Commission encourages owners or operators to conduct inspections prior to the 2018 summer ozone months to more effectively take advantage of the resulting emission reductions.

To ensure that the Ozone SIP LDAR program in Section XII.L. works with the existing State Only LDAR program in Section XVII.F., the Commission has maintained the same thresholds for identifying leaks that require repair. While the Oil and Gas CTG employs a methane concentration threshold when detected with EPA Method 21, Colorado's LDAR program uses a hydrocarbon concentration threshold. The Commission has also revised Section II. to clarify that Section XII.L. includes the use of hydrocarbons as an indicator of VOC emission reductions.

Concerning the use of non-quantitative instrument monitoring methods, the Commission adopted a quality assurance requirement that owners or operators maintain and operate such devices according to manufacturer recommendations. This requirement corresponds to recommendations in the Oil and Gas CTG concerning the maintenance and operation of OGI uses to detect fugitive emission components. The Commission intends for the Division to work with owners or operator to address any concerns that arise from manufacturer specifications for the maintenance of non-quantitative instrument monitoring methods.

Consistent with the current LDAR program in Section XVII.F., the Commission adopted a requirement to make a first attempt to repair an identified leak within five working (*i.e.*, business) days of discovery. In both Section XII.L. and in Section XVII.F., the Commission has included a requirement that repairs be completed within 30 days unless one of the existing justifications for delay of repair applies. As with compressors and pneumatic pumps, owners or operators may delay subsequent repair attempts of equipment where, during a scheduled shutdown, the owner or operator unsuccessfully repaired the leak requiring repair so long as repair is completed within two years of discovery. The Commission has also maintained the flexibility of the State Only LDAR program in the SIP by giving owners or operators detecting leaks with a non-quantitative method (*e.g.*, IR camera) the ability to quantify the leaks within five working days. If the quantification shows that the leak must be repaired under Section XII.L.5., the deadline to repair runs from the date of discovery, not from the date of quantification.

As it did for Section XVII.F.7.c. in 2014, the Commission has also memorialized its intent, in Section XII.L.5.c., that operators not be subject to enforcement for leaks so long as operators are complying with the LDAR program requirements. However, as it also explained in 2014, the Commission does not intend to relieve owners or operators of the obligation to comply with the general requirements of Section XII.C. For example, closing an open thief hatch within five days of an LDAR inspection does not shield an owner or operator from a possible violation of the requirement to minimize emissions to the maximum extent practicable.

Similarly, the Commission does not intend to relieve owners or operators of the obligation, on a State Only basis, to comply with the requirements of Section XVII., including the requirements in Sections XVII.B. and XVII.C.2. to minimize leakage to the extent reasonably practicable and operate without venting, respectively. However, the Commission does not intend these State Only provisions be enforceable under the Ozone SIP.

Recordkeeping and reporting

The Commission has determined that the current requirements did not adequately incentivize owners or operators to make all reasonable good faith efforts to obtain parts necessary to complete repairs. As a result, some leaks continued on delay of repair lists for an unreasonable length of time. Therefore, the Commission has determined that a review and record of such delays by a representative of the owner or operator is necessary for those occasions where unavailable parts have resulted in a delay of repair beyond 30 days.

The Commission expanded the recordkeeping for repair dates to include records of the type of repair method applied. The Commission determined this recordkeeping element aligns with recommendations in the Oil and Gas CTG and will more accurately inform repair activities. The Commission intends for the Division to work with owners and operators to establish a generally standardized set of different types of repair to ensure that owners and operators are consistently recording the information required.

The Commission also expanded the requirements for the annual LDAR report to ensure that the data submitted to the Division more accurately represents and summarizes the activities and effectiveness of the LDAR program. The Commission intends that the LDAR reports include the number of inspections, leaks requiring repair, leaking component type, and monitoring method by which the leaks were found – broken out by facility type (*i.e.*, inspection frequency tier of well production facility or natural gas compressor station).

The Commission intends that both the SIP and State Only LDAR reporting requirement can be satisfied by one report. The Commission expects that the first annual report containing the information required by these revisions will be submitted by May 31, 2019 (*i.e.*, no changes are expected to current requirements for the May 31, 2018, annual report representing leak detection and repair activities conducted during 2017).

Alternative approved instrument monitoring method ("AIMM")

The Commission has adopted a process for the review and approval of alternative instrument monitoring methods. The CAA prohibits a state from modifying SIP requirements except through specified CAA processes. EPA interprets this CAA provision to allow EPA approval of SIP provisions that include state authority to approve alternative requirements when the SIP provisions are sufficiently specific, provide for sufficient public process, and are adequately bounded such that EPA can determine, when approving the SIP provision, how the provision will actually be applied and whether there are adverse impacts. (State Implementation Plans: Response to Petition for Rulemaking; Restatement and Update of EPA's SSM Policy Applicable to SIPs; Findings of Substantial Inadequacy; and SIP Calls to Amend Provisions Applying to Excess Emissions During Periods of Startup, Shutdown and Malfunction, 80 Fed. Reg. 33917-33918, 33927 (June 12, 2015)) Therefore, the Commission includes an application and review process in the SIP for the potential approval of instrument monitoring methods as alternatives to an infra-red camera or EPA's Method 21. The approval may also include modified recordkeeping and reporting requirements based on the capabilities of the potential alternative instrument monitoring method. This proposed process does not alter the stringency of Colorado's well production facility and natural gas compressor station LDAR program because an alternative AIMM must be capable of reducing emissions through the detection and repair of leaks comparable to the leaks detected and repaired as specified in the SIP to be potentially approvable.

The Commission received comments from stakeholders requesting that the Commission explicitly provide for the ability to employ certain alternatives not equipped with the leak detection capabilities of infra-red cameras or Method 21. These stakeholders emphasized that monitoring technologies are evolving rapidly and new technologies and monitoring programs are being developed that, when used on their own or in conjunction with other methods, may provide the same or better leak detection and repair results, at potentially lower costs. The process outlined in Section XII.L.8. requires an applicant to demonstrate that the proposed alternative monitoring achieves emission reductions that are at least as effective as the leak detection and repair program in Section XII.L. The Commission intends that the rule be flexible enough to allow the Division to consider such alternative monitoring methods or programs, as long as the applicant can demonstrate that the proposed method or program achieves emission reductions that are as effective as other approved technologies or methods. To make this demonstration, an applicant may consider demonstrating that a program of alternative inspection frequencies, pollutants detected, or leak thresholds for repair achieves emission reductions comparable to the inspection frequencies and leaks requiring repair thresholds in Section XII.L., thus the consideration of an alternative leak detection program. The Commission recognizes that current, established approaches or methodologies to evaluate the performance of alternative monitoring technologies and programs as compared to baseline monitoring technologies (infra-red camera, EPA Method 21) do not yet exist. However, such methodologies are being developed.

For example, the Interstate Technology and Regulatory Council (ITRC), in which Colorado participates, is developing, but has not yet published, a guidance document to establish, if possible, a consensus for evaluating and comparing the effectiveness of leak detection technologies. While the criteria for evaluating the effectiveness of an alternative program as compared to the base program is being developed, alternative monitoring method applicants may submit an application for approval of an alternative monitoring method but must be prepared to present a robust and complete evaluation of the technology or program's performance that allows for comparison to the base technologies in the SIP. It is possible the Division may delay consideration and final determination regarding an alternative monitoring method or program application until established comparison criteria are developed or submitted. Taking into account the deliberations of the ITRC process, the Commission expects that the Division will consider complete applications in a timely manner.

The Commission also received comments from stakeholders requesting that the Commission clarify EPA's participation regarding potential alternative monitoring methods. As discussed, the Commission believes that the process to review and potentially approve alternative monitoring methods is sufficiently constrained such that EPA, when approving the process, can be assured as to what emission reductions any such alternative monitoring will achieve in the context of the Section XII.L. LDAR program. However, the Commission also recognizes EPA's technical knowledge and is requiring the Division to continue to engage with EPA concerning alternative monitoring methods. Specifically, the Division must provide complete applications to EPA early in the review process, which has previously ranged from three to nine months. The Division must also provide EPA six (6) months after approval of an alternative for further EPA review. The Commission believes this process provides sufficient time for meaningful engagement with EPA.

Clarifications

The Commission is clarifying, both in Section XII.L. and Section XVII.F., that all detected emissions are leaks, but that only those leaks above specified thresholds require repair. The Commission did not intend that leaks falling below the specified thresholds would not be considered "leaks," only that those leaks did not require repair in accordance with the prescribed schedules. The Commission has further clarified that only records of leaks requiring repair need to be maintained. Regulation Number 7 already requires that owners or operators remonitor repaired leaks with an AIMM. AIMM includes EPA Method 21, which includes the soapy water method, and the Commission further clarifies that an owner or operator may use the soapy water method in EPA Method 21 to remonitor a repaired leak. Some stakeholders asked the Commission to "clarify" that the LDAR repair, remonitoring, recordkeeping, and reporting requirements applied only to those leaks discovered by the owner or operator, and not those discovered by the Division. The Commission believes that would not be a clarification, but a change to the current program, and does not make that requested revision at this time. Therefore, the repair, remonitoring, recordkeeping, and reporting requirements continue to apply to leaks discovered by the Division.

Pneumatic controllers (Section XVIII.)

The Commission is adopting both Ozone SIP and State Only revisions to Section XVIII. The Commission added definitions of continuous bleed and intermittent pneumatic controller. The Commission also added "continuous bleed" to several provisions throughout Sections XVIII.C. through XVIII.E. to clarify that the provisions adopted in 2014 primarily applied to continuous bleed pneumatic controllers (which emit continuously) as opposed to intermittent pneumatic controllers (which emit only when actuating).

Pneumatic controllers at or upstream of natural gas processing plants

Section XVIII. already requires that owners or operators install low-bleed pneumatic controllers at or upstream of natural gas processing plants, unless a high-bleed pneumatic controller is required for safety or process purposes. This requirement is consistent with the Oil and Gas CTG and the Commission intends that these provisions be included in Colorado's Ozone SIP.

The Commission adopts additional requirements, consistent with the Oil and Gas CTG, related to pneumatic controllers at natural gas processing plants. The Commission is requiring that all continuous bleed, natural gas-driven pneumatic controllers at a natural gas processing plant have a bleed rate of zero (*i.e.*, no VOC emissions), unless a pneumatic controller with a bleed rate greater than zero is necessary due to safety and process reasons. To satisfy this requirement, owners or operators of natural gas processing plants could, for example, drive pneumatic controllers with instrument air, use mechanical or electrically powered pneumatic controllers, or use self-contained pneumatic controllers that release natural gas to a downstream pipeline instead of to the atmosphere. The requirements to submit a justification for a pneumatic controller exceeding the emission standard to the Division, as well as the requirements for tagging and records, duplicate and are intended to be consistent with existing requirements related to high-bleed pneumatic controllers.

The requirement to maintain pneumatic controllers exceeding the applicable emission standard are also duplicated from the existing high-bleed maintenance requirement, but revised to include the suggested maintenance actions specifically in the applicable provisions, instead of referring to an “enhanced maintenance” definition. The Commission revised the maintenance requirement in this manner to separate the actions taken to maintain a pneumatic controller exceeding the applicable emission standard from the, potentially very similar, actions taken to return a pneumatic controller to proper operation. For example, the owner or operator of a high-bleed pneumatic controller or a pneumatic controller with a bleed rate greater than zero at a natural gas processing plant is required to perform specified maintenance on the pneumatic controller regardless of whether or not the pneumatic controller is determined to be properly operating. In contrast, the owner or operator of a pneumatic controller inspected under Section XVIII.F. must conduct enhanced response to return that pneumatic controller to proper operation.

Additionally, the Commission is requiring owners or operators to maintain records demonstrating their continuous bleed, natural gas-driven pneumatic controllers meet the applicable low-bleed or bleed rate of zero standards. These records are also intended to inform the extent to which continuous bleed pneumatic controllers are used in the DMNFR. The Commission understands that the number of continuous bleed, natural gas-driven pneumatic controllers in use by an operator can change frequently, and is not requiring a running log or count of each individual pneumatic controller. The Commission adopted these recordkeeping requirements with the expectation that owners or operators can keep records including, but not limited to, site-specific documentation of continuous bleed, natural gas-driven pneumatic controllers such as manufacturer specifications, engineering calculations, field test data, or documentation of a company’s continuous bleed, natural gas-driven pneumatic controller purchase and installation program ensuring that any such pneumatic controller meets the applicable bleed rate standard.

Clarification

The Commission is also clarifying the intent behind provisions adopted in 2014 regarding the use of pneumatic controllers powered by instrument air (as opposed to natural gas) when grid power is being used. In 2014, the Commission intended that when a pneumatic controller was proposed for installation, owners or operators would power the pneumatic controller via electrical power instead of natural gas when electrical grid power was being used on-site. The provisions adopted in 2014 allowed owners or operators to install a pneumatic controller with VOC emissions equal to or less than a low-bleed pneumatic controller in some situations. The Commission has learned that some owners or operators interpret the rule as providing the option of installing either no-bleed or low-bleed pneumatic controllers in all situations.

Even though the Commission believes its intent was clear, the Commission recognizes that the rule could fairly be described as ambiguous and that there is a good faith legal argument for the alternative interpretation. The Commission is revising the rule to clarify that where electric grid power is being used on site and it is technically and economically feasible to install no-bleed pneumatic controllers, any newly installed pneumatic controllers must be no-bleed. Where the owner or operator determines it is not technically and economically feasible to install a no-bleed pneumatic controller, the owner or operator may install a low-bleed or intermittent pneumatic controller.

The Commission recognizes that the installation of an electrically-powered controller may have been feasible in 2014, but may not be feasible to retrofit at this time. The Commission nonetheless encourages owners or operators statewide who, based on a misreading of the regulation, did not install a no-bleed pneumatic controller to evaluate whether retrofitting controllers – with no-bleed or self-contained pneumatic controllers – at this time is technically and economically feasible. The Commission also encourages owners and operators statewide to install, or retrofit with, no-bleed or self-contained pneumatic controllers at locations across the state, even where on site electrical grid power is not available to the extent there is no significant air quality disbenefit in doing so.

Natural gas driven pneumatic controller inspection and enhanced response (State Only)

Following the 2014 rulemaking, the Commission requested that the Division continue its investigation into potential regulations for intermittent pneumatic controllers. During the recent 2016 ozone rulemaking, stakeholders again asked the Commission to address intermittent pneumatic controllers. In response, the Commission again directed the Division to evaluate potential emission reduction measures for intermittent pneumatic controllers.

The Commission is adopting an inspection and enhanced response (e.g., maintenance) program for natural gas-driven pneumatic controllers. While the Oil and Gas CTG notes the value of pneumatic controller inspection and maintenance, the Oil and Gas CTG does not specify a pneumatic controller inspection and maintenance as presumptive RACT. Therefore, while the Commission determined that these revisions are technically and economically feasible, the revisions are proposed as State Only in the DMNFR and are not made part of the Ozone SIP at this time. Natural gas-driven pneumatic controllers include continuous bleed, intermittent, and self-contained pneumatic controllers. Recent studies of pneumatic controllers have found that malfunctioning devices contribute a significant amount of hydrocarbon emissions to the atmosphere.

The Oil and Gas CTG suggests that maintenance of pneumatic controllers, including cleaning and tuning, can eliminate excess emissions from the devices. While the Oil and Gas CTG's recommended RACT (low-bleed or zero emissions) applies to continuous bleed, natural gas-driven pneumatic controllers, the discussion concerning enhanced maintenance of pneumatic controllers builds on earlier EPA discussions, such as EPA's 2014 Pneumatic Controller White Paper, and is not limited to continuous bleed pneumatic controllers. The Commission recognizes that continuous bleed and intermittent pneumatic controllers are designed to have emissions, however these pneumatic controllers can also have excess emissions when not operating properly. As a result, the Commission believes that a pneumatic controller inspection and response program will reduce the excess emissions from such pneumatic controllers.

The Commission intends to apply the same find and fix approach used in the LDAR requirements in Sections XII.L. and XVII.F. to all natural gas-driven pneumatic controllers in the DMNFR. The Commission is requiring that natural gas-driven pneumatic controllers at well production facilities and natural gas compressor stations in the DMNFR be inspected periodically to determine whether the pneumatic controller is operating properly, in contrast to quantitatively comparing pneumatic controller emissions to a regulatory threshold. The Commission is requiring that owners or operators inspect pneumatic controllers at well production facilities annually, semi-annually, quarterly, or monthly, depending on the well production facility VOC emissions, and at natural gas compressor stations quarterly or monthly, depending on the natural gas compressor station fugitive emissions.

The Commission expects that owners or operators will inspect their pneumatic controllers during the same LDAR inspections, and using the same AIMM, conducted for compliance with Sections XII.L. or XVII.F. The pneumatic controller inspection and enhanced response process is intended to be a multi-step process. First, the owner or operator must inspect all natural gas-driven pneumatic controller using AIMM to screen for detectable emissions. This first step allows owners or operators to narrow potential response efforts to only those pneumatic controllers with detected emissions. Second, the owner or operator must determine whether the pneumatic controllers with detected emissions are operating properly. Use of an AIMM is not required during this second step; the Commission does not at this time intend to mandate to owners or operators how to determine if their pneumatic controllers are operating properly. During this second step, if an owner or operator determines that the pneumatic controller is operating properly, no further action is necessary. Third, where an owner or operator determines the pneumatic controller is not operating properly, the owner or operator must take actions to return an improperly operating pneumatic controller to proper operation. Fourth, general recordkeeping and reporting requirements apply broadly to the number of facilities inspected and number of inspections. More detailed recordkeeping and reporting is required for those pneumatic controllers that the owner or operator determined not to be operating properly.

Similar to the LDAR records, owners or operators must keep records of the date the pneumatic controller was returned to proper operation and a description of the types of actions taken. As with well production facility and natural gas compressor station LDAR records, the Commission intends for the Division to work with owners and operators to establish a generally standardized set of different types of response actions to ensure that owners and operators are consistently recording the information required. The Commission expects that owners or operators will include the pneumatic controller information as State Only information in their LDAR annual reports. In returning a pneumatic controller to proper operation, the Commission relies upon the previously defined term, now enhanced response, found in Section XVIII.B. related to maintaining high-bleed pneumatic controllers. The Commission has expanded this definition to guide responsive activities concerning all natural gas-driven pneumatic controllers. Recognizing that the function and potential maintenance or repair of pneumatic controllers can be variable, owners or operators are not restricted to using an AIMM to determine proper operation or verify the return to proper operation. The Commission has adopted a "reassessment" provision for this inspection and enhanced response program following a Division led study of pneumatic controller emission reduction options, including the rate, type, application, and causes of pneumatic controllers found operating improperly; inspection and repair techniques and costs; available preventative maintenance methods; appropriateness of the definitions of enhanced response, intermittent pneumatic controller, no-bleed pneumatic controller, self-contained pneumatic controller, and pneumatic controller; and other related information. The Commission also recognizes that owners and operators may currently have limited information on "good engineering and maintenance practices" for pneumatic controllers and intends that more information on these practices will be gathered during the pneumatic study and implementation of Section XVIII.F. to inform the reassessment of the inspection and enhanced response program. The data collection effort will include data from a representative cross-section of well production facilities and natural gas compressor stations in the DMNFR.

In accordance with industry's proposal, a task force will be convened by January 30, 2018, consisting of representatives from industry, the Division, local governments, environmental groups, and other interested parties. Data collection will begin no later than by May 1, 2018. The task force will brief the Commission annually and make any recommendations on its findings in a report to the Commission, due May 1, 2020. The Commission intends that the Division, industry, local government, and environmental group task force participants each have the opportunity to contribute to the final report and provide one representative to speak during the briefings to the Commission. The Commission intends that this information be used to reassess the natural gas-driven pneumatic controller requirements of Section XVIII.F. Section XVIII.F. will remain in effect until rescinded, superseded, or revised. The Commission recognizes that there is much to learn about the inspection and maintenance of natural gas-driven pneumatic controllers, which highlights the need for the reassessment of Section XVIII.F. as well as enforcement discretion. The Commission intends that while the task force is actively working on data collection and the 2020 report to the Commission, the determination of whether a pneumatic controller is operating properly will be made by the owner or operator. Any information gathered through the task force, including on preventative, good engineering, and maintenance practices, will be used to reassess Section XVIII.F. and will not be used for enforcement purpose through 2020.

Additional Considerations

Colorado must revise Colorado's Ozone SIP to address the ozone Moderate nonattainment area requirements. The CAA does not expressly address all of the provisions adopted by the Commission. Rather, federal law establishes the 8-hour ozone NAAQS and requires Colorado to develop a SIP adequate to attain the NAAQS. The Commission carefully considered what provisions to include in Colorado's Ozone SIP, especially given Colorado's pre-existing emission control requirements that address most of the same sources addressed by the Oil and Gas CTG, yet do so differently. Some of these pre-existing requirements were adopted into Colorado's SIP and some will remain as State Only requirements. In determining what existing provisions would be included in Colorado's Ozone SIP, the Commission considered: 1) whether or not Colorado had existing emission control measures for the same sources covered by the Oil and Gas CTG; 2) whether these existing requirements were already adopted for inclusion in the Ozone SIP; and 3) the degree of emissions reductions achieved by any existing Colorado emission control measures in comparison to the Oil and Gas CTG.

In resolving differences between existing Colorado provisions and the Oil and Gas CTG, preference was given to existing Colorado provisions, especially those already incorporated into Colorado's Ozone SIP and Colorado's existing regulatory framework. For example, the Commission relied upon existing storage tank requirements already adopted into Colorado's Ozone SIP. In the case of well production facility LDAR, the Commission adopted a tpy applicability threshold in place of the Oil and Gas CTG's BOE threshold, which applies to more sources than the Oil and Gas CTG, yet adopted a less frequent inspection frequency into the Ozone SIP for the smaller facilities than the Oil and Gas CTG.

In determining whether or not any additional requirements would be relied upon in establishing RACT in Colorado's Ozone SIP for the oil and gas sector, the Commission determined whether or not the emission control measures were necessary for the ozone attainment demonstration. In the case of LDAR for pneumatic controllers at well production facilities and natural gas compressor stations, the Commission adopted emission control measures as State Only measures given the need to obtain emission reductions as well as more information on this source type. These examples illustrate the Commission's careful consideration of what provisions to include in Colorado's Ozone SIP. The CAA requires that Colorado's Ozone SIP include RACT for all sources covered by a CTG, such as the emission sources addressed in the Oil and Gas CTG. Therefore, the Commission adopted certain revisions to Regulation Number 7 to ensure attainment with the 2008 8-hour ozone NAAQS and satisfy Colorado's Moderate nonattainment area obligations, including those related to RACT. These revisions do not exceed or differ from the federal act due to state flexibility in developing nonattainment area SIPs.

The Commission is also revising certain State Only regulations to reduce emissions and promote attainment of current federal ozone standards. Specifically, the Commission is adopting requirements related to the inspection of natural gas-driven pneumatic controllers at oil and gas facilities. As discussed, malfunctioning pneumatic controllers can result in significant hydrocarbon emissions. The DMNFR ozone nonattainment area is currently classified as a Moderate nonattainment area under the 2008 ozone NAAQS. The deadline for the DMNFR to attain the 2008 ozone NAAQS is July 2, 2018. If the DMNFR does not attain the standard or does not receive an extension, EPA may reclassify the DMNFR as a Serious nonattainment area under the 2008 ozone NAAQS. In addition, the Commission approved a designation recommendation for the DMNFR under the 2015 ozone NAAQS in September 2016. While EPA has not yet acted on this recommendation, the Commission expects the DMNFR will be designated as nonattainment under the 2015 ozone NAAQS and is taking action to promote attainment of the more stringent standard. Given both the potential for a reclassification to Serious under the 2008 ozone NAAQS and the need to reduce ozone to meet the more stringent 2015 ozone NAAQS, the Commission is adopting the State Only pneumatic controller inspection requirements that further reduce ozone precursors emissions, notwithstanding the fact that a pneumatic controller inspection program is not specified as presumptive RACT in the Oil and Gas CTG.

In accordance with C.R.S. § 25-7-110.5(5)(b), the Commission determines:

- (I) CAA Sections 172(c) and 182(b) require that Colorado submit a SIP that includes provisions requiring the implementation of RACT at sources covered by a CTG. The EPA issued the final Oil and Gas CTG in October 2016, leading to the revisions to the Ozone SIP adopted by the Commission. The EPA revised the ozone NAAQS in 2015 and the DMNFR must attain the new standard or face additional requirements. The revisions to Regulation Number 7 address RACT for compressors, pneumatic pumps, pneumatic controllers, natural gas processing plants, natural gas compressor stations, and well production facilities. The revisions apply to equipment already regulated by Colorado on a State Only basis and apply to equipment not previously subject to regulation. NSPS OOOO, NSPS OOOOa, NSPS Kb, NSPS KKK, NESHAP HH, and NESHAP HHH may also apply to the regulated equipment. The Commission determined that the adopted RACT SIP requirements are comparable to the Oil and Gas CTG's recommendations. The Commission also determined that there are not comparable federal rules requiring the inspection and maintenance of natural gas-driven pneumatic controllers.

- (II) The federal rules discussed in (I), are primarily technology-based in that they largely prescribe the use of specific technologies in order to comply. EPA has provided some flexibility in NSPS OOOO and NSPS OOOOa by allowing a storage vessel to avoid being subject to NSPS OOOO if the storage vessel is subject to any state, federal, or local requirement that brings the storage vessel's emissions below the NSPS OOOO threshold. EPA has also provided some flexibility in NSPS OOOOa to allow an owner or operator to request EPA approve compliance with an alternate emission limitation (e.g., alternative monitoring, state program) instead of related requirements in NSPS OOOOa.
- (III) The CAA establishes the 8-hour ozone NAAQS and requires Colorado to develop SIP revisions that will ensure timely attainment of the NAAQS. The ozone NAAQS was not determined taking into account concerns unique to Colorado. In addition, Colorado cannot rely exclusively on a federally enforceable permit or federally enforceable NSPS or NESHAP to satisfy Colorado's Moderate nonattainment area RACT obligations. Instead, Colorado can adopt applicable provisions into its SIP directly, as the Commission has done here. Further, the State Only pneumatic controller inspection requirements address the lack of federal requirements concerning emissions from malfunctioning pneumatic controllers.
- (IV) Unless federal law changes, Colorado will be required to comply with the more stringent 2015 ozone NAAQS in the near future and may be required to comply with the more stringent requirements for a Serious nonattainment area. These current SIP and State Only revisions may improve the ability of the regulated community to comply with new, more stringent, future requirements. In addition, these revisions build upon the existing regulatory programs being implemented by Colorado's oil and gas industry, which is more efficient and cost-effective than a wholesale adoption of EPA's recommended oil and gas RACT provisions.
- (V) EPA has established October 27, 2018, deadline for this SIP submission. EPA has not yet established deadlines for the DMNFR to attain the 2015 ozone NAAQS. However, given the potential reclassification of the DMNFR to Serious under the 2008 ozone NAAQS, the Commission determined that taking action to reduce ozone precursor emissions as soon as practicable, either as part of the SIP or on a State Only basis, is warranted.
- (VI) The revisions to Regulation Number 7 Sections XII. and XVIII. strengthen Colorado's SIP and State Only provisions, which currently addresses emissions from the oil and gas sector in a cost-effective manner, allowing for continued growth of Colorado's oil and gas industry.
- (VII) The revisions to Regulation Number 7 Sections XII. and XVIII., including the State Only provisions, establish reasonable equity for oil and gas owners and operators subject to these rules by providing the same standards for similarly situated and sized sources.
- (VIII) If Colorado does not attain the 2008 ozone NAAQS by July 20, 2018, or qualify for an extension of the attainment deadline, EPA will likely reclassify Colorado as a Serious ozone nonattainment area, which automatically reduces the major source thresholds from 100 tons per year of VOC and NOx to 50 tons per year; thus subjecting more sources to major source requirements. If EPA does not approve Colorado's SIP, EPA may promulgate a Federal Implementation Plan; thus potentially determining RACT for Colorado's sources. Either of these outcomes may subject others to increased costs. The State Only rule revisions are expected to reduce future costs by achieving emissions reductions that will assist the DMNFR in attaining both the 2008 and 2015 ozone NAAQS thus avoiding additional ozone nonattainment area CAA requirements.
- (IX) Where necessary, the revisions to Regulation Number 7 include minimal monitoring, recordkeeping, and reporting requirements that correlate, where possible, to similar federal or state requirements. The State Only pneumatic controller inspection program is tailored to be consistent with the SIP required LDAR program, thereby reducing costs related to pneumatic controller inspections.

- (X) Demonstrated technology is available to comply with the revisions to Regulation Number 7. Some of the revisions expand upon requirements already applicable, such as the requirements for compressors, pneumatic controllers, leak detection and repair at well production facilities and natural gas compressor stations, and equipment leaks at natural gas processing plants. Further, pneumatic controller inspections will be conducted using accepted technologies and some owners or operators already repair and maintain pneumatic controllers.
- (XI) As set forth in the Economic Impact Analysis, the revisions to Regulation Number 7 contribute to the prevention of ozone in a cost-effective manner.
- (XII) Alternative rules could also provide reductions in ozone and help to attain the NAAQS. However, a no action alternative would very likely result in an unapprovable SIP. The Commission determined that the Division's proposal was reasonable and cost-effective. The Commission further determined the State Only natural gas-driven pneumatic controller inspection program is reasonable and cost-effective, given the potential for reducing emissions from malfunctioning pneumatic controllers and the absence of federal requirements addressing pneumatic controller emissions.

As part of adopting the revisions to Regulation Number 7, the Commission has taken into consideration each of the factors set forth in C.R.S. § 25-7-109(1)(b).

Colorado must revise Colorado's Ozone SIP to address the Moderate nonattainment area requirements. Colorado must also continue to reduce ozone concentrations to address both the possibility of reclassification under the 2008 ozone NAAQS and the 2015 ozone NAAQS. However, to the extent that C.R.S. § 25-7-110.8 requirements apply to this rulemaking, including regulatory changes made on a State Only basis, and after considering all the information in the record, the Commission hereby makes the determination that:

- (I) These rules are based upon reasonably available, validated, reviewed, and sound scientific methodologies, and the Commission has considered all information submitted by interested parties.
- (II) Evidence in the record supports the finding that the rules shall result in a demonstrable reduction of the ozone precursors VOC.
- (III) Evidence in the record supports the finding that the rules shall bring about reductions in risks to human health and the environment that justify the costs to implement and comply with the rules.
- (IV) The rules are the most cost-effective to achieve the necessary and desired results, provide the regulated community flexibility, and achieve the necessary reduction in air pollution.
- (V) The selected regulatory alternative will maximize the air quality benefits of regulation in the most cost-effective manner.

Q. July 19, 2018 (Sections XVI. and XIX.)

This Statement of Basis, Specific Statutory Authority, and Purpose complies with the requirements of the Colorado Administrative Procedures Act §§ 24-4-103(4), the Colorado Air Pollution Prevention and Control Act, C.R.S. §§ 25-7-110 and 25-7-110.5., and the Air Quality Control Commission's ("Commission") Procedural Rules.

Basis

On May 21, 2012, the Denver Metro/North Front Range ("DMNFR") area was designated as Marginal nonattainment for the 2008 8-hour Ozone National Ambient Air Quality Standard ("NAAQS"), effective July 20, 2012, with an attainment date of July 20, 2015 (77 Fed. Reg. 30088). On May 4, 2016, the U.S. Environmental Protection Agency ("EPA") published a final rule that determined that DMNFR area failed to attain the 2008 8-hour Ozone NAAQS by the applicable Marginal attainment deadline and therefore reclassified the DMNFR area to Moderate, effective June 3, 2016, and required attainment of the NAAQS no later than July 20, 2018, based on 2015-2017 ozone season data.

Due to the reclassification, Colorado must submit revisions to its State Implementation Plan ("SIP") to address the Clean Air Act's ("CAA") Moderate nonattainment area requirements, as set forth in CAA § 182(b) and the final SIP Requirements Rule for the 2008 Ozone NAAQS (See 80 Fed. Reg. 12264 (March 6, 2015)). The SIP revision must include Reasonably Available Control Technology ("RACT") requirements for major sources of VOC and/or NO_x (i.e. sources that emit or have the potential to emit 100 tons per year ("tpy") or more). The CAA does not define RACT. However, EPA has defined RACT as the "lowest emission limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility." 44 Fed. Reg. 53762 (Sept. 17, 1979). RACT can be adopted in the form of emissions limitations or work practice standards or other operation and maintenance requirements as appropriate.

Statutory Authority

The Colorado Air Pollution Prevention and Control Act, C.R.S. §§ 25-7-101, et seq., ("Act"), § 25-7-105(1) (a) directs the Commission to promulgate such rules and regulations necessary for the proper implementation and administration of a comprehensive SIP that will assure attainment and maintenance of national ambient air quality standards. § 25-7-301 directs the Commission to develop a program providing for the attainment and maintenance of each national ambient air quality standard in each nonattainment area of the state. § 25-7-106 provides the Commission flexibility in developing an effective air quality program and promulgating such combination of regulations as may be necessary or desirable to carry out that program. § 25-7-106(1)(c) and (2) also authorize the Commission to promulgate emission control regulations applicable to the entire state, specified areas or zones, or a specified class of pollution, and monitoring and recordkeeping requirements. Section 109(1)(a) authorizes the Commission to promulgate regulations requiring effective and practical air pollution controls for significant sources and categories of sources of air pollutants.

Purpose

The Regional Air Quality Council ("RAQC") and the Air Pollution Control Division ("Division") conducted a public process to develop the associated SIP and supporting rule revisions. In response to the reclassification, the Commission revised Regulation Number 7 to satisfy RACT SIP requirements for Moderate nonattainment areas by establishing categorical RACT requirements for major sources of VOC and/or NO_x in the DMNFR. Specifically, the Commission adopted RACT requirements in Section XVI.D. for existing boilers, stationary combustion turbines, lightweight aggregate kilns, glass melting furnaces, and compression ignition reciprocating internal combustion engines ("RICE") (collectively referred to as "stationary combustion equipment") located at major sources of NO_x in the DMNFR as of June 3, 2016. The revisions also correct typographical, grammatical, and formatting errors found through the regulation.

The following explanations provide further insight into the Commission's intention for certain revisions and, where appropriate, the technological or scientific rationale for the revision.

Major VOC and NOx source RACT

Colorado has major sources of VOC and/or NOx in the ozone nonattainment area. The following sources were known by the Commission to be major sources of VOC and/or NOx as of June 3, 2016 and were analyzed in Colorado's Moderate Area SIP for the 2008 8-Hour Ozone NAAQS:

Anheuser-Busch, Fort Collins Brewery (069-0060) and Nutri-Turf (123-0497) (major for VOC and NOx)

Ball Metal Beverage Container Corporation (059-0010 major for VOC)

Buckley Air Force Base (005-0028 major for NOx)

Carestream Health (123-6350 major for NOx)

Cemex Construction Materials (013-0003 major for VOC and NOx)

Colorado Interstate Gas, Latigo (005-0055 major for NOx)

Colorado Interstate Gas, Watkins (001-0036 major for VOC and NOx)

Colorado State University (069-0011 major for NOx)

CoorsTek (059-0066 major for VOC)

Corden Pharma Colorado (013-0025 major for VOC)

DCP Midstream, Enterprise (123-0277 major for VOC and NOx)

DCP Midstream, Greeley (123-0099 major for VOC and NOx)

DCP Midstream, Kersey/Mewbourn (123-0090 major for VOC and NOx)

DCP Midstream, Lucerne (123-0107 major for VOC and NOx)

DCP Midstream, Marla (123-0243 major for VOC and NOx)

DCP Midstream, Platteville (123-0595 major for VOC and NOx)

DCP Midstream, Roggen (123-0049 major for VOC and NOx)

DCP Midstream, Spindle (123-0015 major for VOC and NOx)

Denver Regional Landfill, Front Range Landfill, Timberline Energy (123-0079 major for NOx)

Elkay Wood Products (001-1602 major for VOC)

IBM Corporation (013-0006 major for NOx)

Kerr-McGee Gathering, Frederick (123-0184 major for VOC and NOx)

Kerr-McGee Gathering, Hudson (123-0048 major for VOC and NOx)

Kerr-McGee Gathering, Fort Lupton/Platte Valley/Lancaster (123-0057 major for VOC and NOx)

Kodak Alaris (123-0003 major for VOC)

Metal Container Corporation (123-0134 major for VOC)

Metro/Suez Waste Water Cogeneration Facility (001-0097 major for NOx)

MillerCoors Golden Brewery, Rocky Mountain Metal Container (059-0006), MMI/EtOH (059- 0828), and Colorado Energy Nations Company, LLC (059-0820) (major for VOC and NOx)

Owens-Brockway Glass (123-4406 major for NOx)

Phillips 66 Pipeline, Denver Terminal (001-0015 major for VOC)

Plains End (059-0864 major for VOC and NOx)

Public Service Company, Cherokee (001-0001 major for NOx)

Public Service Company, Denver Steam Plant (031-0041 major for NOx)

Public Service Company, Fort Lupton (123-0014 major for NOx)

Public Service Company, Fort Saint Vrain (123-0023 major for NOx)

Public Service Company, Rocky Mountain Energy Center (123-1342 major for NOx)

Public Service Company, Valmont (013-0001 major for NOx)

Public Service Company, Yosemite (123-0141 major for NOx)

Public Service Company, Zuni (031-0007 major for NOx)

Rocky Mountain Bottle Company (059-0008 major for NOx)

Sinclair Transportation Company, Denver Terminal (001-0019 major for VOC)

Spindle Hill Energy (123-5468 major for NOx)

Suncor Energy, Commerce City Refinery Plants 1, 2, and 3 (001-0003 major for VOC and NOx)

Thermo Cogeneration, JM Shafer (123-0250 major for NOx)

Tri-State Generation, Frank Knutson (001-1349 major for NOx)

TRNLWB, LLC (Trinity Construction Materials, Inc.) (059-0409 major for NOx)

University of Colorado Boulder (013-0553 major for NOx)

WGR Asset Holding, Wattenberg (001-0025 major for VOC and NOx)

Many of the major sources listed are subject to regulatory RACT requirements. Some of the sources or source emissions points are subject to regulatory RACT requirements in Colorado's SIP; other sources or source emissions points are subject to individual RACT requirements established in federally enforceable permits as a minor source RACT requirement of inclusion of an applicable federal New Source Performance Standards ("NSPS") or National Emission Standard for Hazardous Air Pollutants ("NESHAP"). However, as a Moderate nonattainment area, Colorado must include in the SIP, provisions to implement RACT for Colorado's major sources. During the November 17, 2016 rulemaking, the Commission adopted source specific RACT for a number of major sources of VOC and/or NOx (again greater than or equal to 100 tons per year) in the DMNFR. These were originally adopted as Sections XIX.C.-XIX.G. for stationary combustion turbines, stationary internal combustion engines, wood furniture manufacturing, and municipal landfills, respectively, during the November 17, 2016 rulemaking. These sections have changed to Sections XVI.D.4.b. and XIX.A.-D. during this July 19, 2018 rulemaking, where requirements for stationary combustion turbines were removed and consolidated into Section XVI.D.4.b. The original Section XIX.C.-XIX.G. RACT requirements became effective on January 1, 2017. However, during the November 17, 2016 rulemaking, the Commission determined that little, if any, additional controls could be implemented by certain major sources by January 1, 2017. The Commission also determined that not all major sources or major source emission points were subject to existing regulatory RACT requirements in Regulation Number 7 or federally enforceable emission limits in Regulation Number 3, Part F. Therefore, the Commission opted to adopt RACT for Colorado's existing major sources of NOx on a categorical basis in this July 19, 2018 rulemaking.

Establishing RACT on a categorical basis is a distinctly different process from Colorado's minor source RACT permitting requirement found in Regulation Number 3, Part B, Section III.D.2. Minor source RACT permitting is specific to new or modified sources (i.e. sources that have already committed to a capital expenditure to construct or modify a process), and the designs of which can more easily accommodate changes prior to construction. Categorical RACT applies much more broadly to source category, including both existing sources/equipment and new/modified sources/equipment. This inclusion of existing equipment significantly impacts costs, as those sources are not already committed to a capital expenditure and any associated shut down to add controls. This ultimately impacts the decision on what controls are determined to be reasonably available, technologically and economically feasible for the source category as a whole. Thus, categorical RACT may in some cases be different from any RACT established for a specific source or piece of equipment under the minor source permitting RACT requirement.

To determine RACT on a categorical basis, the Commission required specific owners or operators to submit a RACT analysis for the facility or specific emission points to the Division by December 31, 2017. In these RACT analyses, sources were required to identify potential options to reduce VOC and/or NOx emissions from the facility or emission point(s), propose RACT for that facility or point(s), propose associated monitoring, propose a schedule for implementation, and include economic and technical information demonstrating why the proposal established RACT for the particular facility or emission point(s).

The following major sources were required to submit RACT analyses:

Anheuser-Busch (069-0060) – emission points equal to or greater than 2 tpy VOC or 5 tpy NOx

Buckley Air Force (005-0028) – engines and engine test cell (pt 102, 103, 104, 105, 101)

Carestream Health (123-6350) – boilers (pt 004)

Colorado Energy Nations Company, LLC (059-0820) – boilers (pt 001, 002)

Colorado Interstate Gas, Latigo (005-0055) – engines (001, 011)

Colorado Interstate Gas, Watkins (001-0036) – engines (001, 002)

Colorado State University (069-0011) – boilers (pt 003, 005, 007, 013)

IBM (013-0006) – engines and boilers (pt 088, 090, 001, 011, 095)

Kerr-McGee Gathering, Fort Lupton/Platte Valley/Lancaster (123-0057) – turbine (pt 052) and engines (pt 038 through 044, and 047 through 049)

Metro/Suez Waste Water Cogeneration Facility (001-0097 major for NOx)

MillerCoors Golden Brewery (059-0006) – emission points with emissions equal to or greater than 2 tpy VOC or 5 tpy NOx

MMI/EtOH (059-0828) – emission points with emissions equal to or greater than 2 tpy VOC or 5 tpy NOx

Nutri-Turf (123-0497) – emission points with emissions equal to or greater than 2 tpy VOC or 5 tpy NOx

Owens-Brockway (123-4406) – emission points with emissions equal to or greater than 5 tpy NOx (pt 001-023, 025)

Public Service Company, Cherokee (001-0001) – turbines (pt 028, 029)

Public Service Company, Fort Saint Vrain (123-0023) – turbines (pt 010, 011, 001)

Public Service Company, Denver Steam Plant (031-0041) – boilers (pt 001, 002)

Public Service Company, Zuni (031-0007) – boilers (pt 001, 002, 003)

Public Service Company, Fort Lupton (123-0014) – turbines (pt 001, 002)

Public Service Company, Valmont (013-0001) – turbine (pt 002)

Rocky Mountain Bottle (059-0008) – glass melt furnaces (pt 001)

Suncor (001-0003) – boilers (pt 309, 019, 021, 023)

Tri-State Generation and Transmission, Frank Knutson (001-1349) – turbines (pt 001, 003)

TRNLWB, LLC (Trinity Construction Materials) (059-0409) – shale kiln (pt 001)

University of Colorado (013-0553) – Power House and East District – boilers (pt 001, 002, 012, 013) and Williams Village– boilers (pt 016, 017)

WGR Asset Holding, Wattenberg (001-0025) – boiler (pt 012), turbine and duct burner (pt 021) and engines (pt 004 and 018)

Based on the information provided in these RACT analyses as well as the Division's own in-depth review of rules adopted by Moderate nonattainment areas in other states and EPA guidance such as the RACT/BACT/LAER Clearinghouse, the Commission adopted RACT requirements in Section XVI.D. for stationary combustion equipment located at existing major sources of NOx in the DMNFR. The requirements of Section XVI.D. only apply to existing stationary combustion equipment located at sources in the DMNFR that were major for NOx as of June 3, 2016 (i.e. the effective date of the DMNFR's reclassification to Moderate nonattainment).

Definitions

The definition for “stationary combustion equipment” refers to individual emission points and not grouped emission points.

Emission limitations and operational requirements

The Commission adopted categorical emission limitations (Section XVI.D.4.), which vary based on fuel type and size of the stationary combustion equipment, where applicable. Affected stationary combustion equipment is required to comply with these exemptions by October 1, 2021. This compliance period is necessary in order to allow affected sources sufficient time to complete any capital expenditures, install any control or monitoring equipment, and/or satisfy any permitting requirements necessary to comply with the applicable emission limitation. The heat input size threshold for determining whether an emission limitation applies refers to the maximum design value of the stationary combustion equipment. De-rated heat input is not the equivalent of maximum design value heat input. Therefore, stationary combustion equipment cannot simply de-rate to fall below the size threshold. For certain categories of stationary combustion equipment, if the equipment’s heat input is below the applicability threshold for the emission limitations, then the equipment would still be required to comply with the combustion process adjustment requirements originally adopted by the Commission during the November 17, 2016 rulemaking (now in Section XVI.D.6.) The compliance date for the categorical emission limits (i.e. XVI.D.4 and XVI.D.5) is independent of the compliance date for the combustion process adjustment (i.e. XVI.D.6(b)(vi)(A)).

The combustion process adjustment requirements shall apply as RACT to a particular piece of equipment in accordance with the applicability provision, Section XVI.D.6.a., regardless of whether or not that piece of equipment is subject to a categorical emission limit in Section XVI.D.4. As described in Section XVI.D.6.a., the combustion process adjustment requirements only apply to stationary combustion equipment with uncontrolled actual emissions of NO_x equal to or greater than 5 tons per year located at major sources of NO_x. For stationary combustion turbines, the heat input capacity threshold for the emission limitations takes into account to the heat input capacity of the stationary combustion turbine only and not the heat input capacity of the stationary combustion turbine and any duct burner that may be used.

For glass melting furnaces at major sources of NO_x, the Commission adopted a production-based categorical emission limitation (Section XVI.D.4.d.). Emissions from some glass melting furnaces are routed through a common stack, where total emissions from multiple furnaces are monitored on a continuous basis. Where this is the case, the total emissions, as monitored from the common stack, shall be divided by the total glass production from all glass melting furnaces associated with the common stack to demonstrate compliance with the categorical RACT limit.

Exemptions

The Commission determined several exemptions from compliance with the categorical RACT standards to be appropriate for Colorado’s source mix. In Section XVI.D.2.a., the Commission adopted a 20% capacity factor exemption for boilers and a 10% capacity factor exemption for stationary combustion turbines and compression ignition reciprocating internal combustion engines. The Commission established the 20% and 10% capacity factor exemptions, in part, as a consolidation of a number of limited-use exemptions that were analyzed and considered by the Division to limit the complexity of the categorical rules and adequately accommodate technical and cost concerns for limited-use equipment. A number of stakeholders requested reasonable exemptions for specific equipment types involving seasonal operation, limited-use, natural gas curtailment, emergency electric generation, provision of replacement capacity during periods of extended primary unit outage for major maintenance, and the lack of manufacturer emission rate guarantees for low capacity units. The Commission determined that the capacity factor exemptions addressed each of these concerns, and thus that additional individual exemptions were not necessary beyond the capacity factor exemption.

At low capacities, controls are often cost prohibitive or technologically infeasible. The Commission determined that there are multiple facilities with excess steam capacity that have the ability to shift capacity (and therefore emissions) away from older higher emitting boilers that are not currently configured to comply with the categorical standard or monitoring requirements. Many of the older boilers are not equipped with continuous emission monitoring systems ("CEMS") and may require add-on controls to comply with the categorical standard. The shift in capacity to newer, lower emitting boilers which are already equipped with NO_x controls and CEMS will result in a net emissions reduction. The 20% capacity factor exemption for boilers provides a secondary compliance option and incentive to facilities that have this ability, and the resulting shift in emissions from high emitting units to low emitting units will result in an overall environmental benefit.

Some stakeholders expressed concerns that a few boilers with low historical use (e.g. heat input below 25%) may need to install controls that cannot meet the RACT standard because manufacturer emission rate guarantees usually apply only when the units operate between 25-100% of the boiler maximum continuous rating ("MCR"). Generally, the boiler burners have a limited range of heat input where the manufacturer can guarantee compliance with a specific emission rate. Emissions from boilers operating at heat inputs below 25% MCR are generally classified as startup/shutdown emissions. Thus, if the Division proposed a RACT standard that a particular low utilization boiler was unable to meet and the Division did not offer an adequate capacity factor exemption, the operator would need to install controls and operate the boiler at higher capacity factors to ensure the installed controls meet manufacturer guaranteed emission rates in order to comply with the RACT standard.

The installation of boiler controls coupled with increasing boiler heat input in order to ensure compliance with a categorical RACT standard runs contrary to the original intent of reducing emissions, thus the Commission concludes that it is reasonable to allow exclusion of limited-use boilers from the categorical standard and associated CEMS requirements, particularly regarding boilers with historically low heat inputs that could not rely on the manufacturer emission rate guarantees if the installation of emission controls are needed in order to comply with the categorical standard. Consequently, the Commission determined that a 20% capacity factor averaged over a 3-year period is reasonable for these limited-use boilers.

For stationary combustion turbines and compression ignition RICE, a 10% capacity factor exemption from the proposed categorical emission standards and monitoring requirements is appropriate because combustion turbines and compression ignition RICE are more likely to operate during the summer months. Moreover, for turbines and compression ignition RICE that are used primarily for emergency power generation or peak demand, historic capacity factors are extremely low (0%-5%), and a 10% capacity factor exemption will provide enough operational flexibility to respond to emergency and peak demand events.

Separately, the categorical RACT for glass melting furnaces provides a 35% low usage allowance similar to capacity factor.

The capacity factor is determined based on the rolling 3-year average of the actual heat input for each calendar year divided by maximum allowable heat input. Alternatively, for electric generating units, the proposal allows for capacity factor to be determined based on electric output, which is consistent with the federal Acid Rain Program.

The Commission intended that the exemption for stationary combustion equipment with total uncontrolled actual emissions less than 5 tpy NO_x was based on the permitting threshold in Regulation Number 3. Similarly, this equipment was not exempted from having to undergo a RACT analysis. The owner or operator must use the most recent air pollution emission notice ("APEN") submitted to the Division to determine total uncontrolled actual emissions.

Stationary combustion equipment that meets one of the exemptions contained in Section XVI.D.2. is not required to comply with the emission limitations, the compliance demonstration requirements and the related recordkeeping and reporting requirements contained in Sections XVI.D.4., XVI.D.5., XVI.D.7., and XVI.D.8., except for XVI.D.7.g, which requires a source that qualifies for an exemption under Section XVI.D.2., to maintain records demonstrating an exemption applies. All stationary combustion equipment is subject to some level of recordkeeping and may also be subject to combustion process adjustment requirements.

Once stationary combustion equipment no longer qualifies for any exemption, the owner or operator must comply with the applicable requirements of Section XVI.D. as expeditiously as practicable but no later than 36 months after the equipment is no longer exempt. Therefore, if any stationary combustion equipment has to undertake a capital expenditure, such as installing a CEMS, in order to comply with Section XVI.D., then they have up to a maximum of three years to come into compliance. However, if no such capital expenditure or change in operational practice is required, then the stationary combustion equipment should comply sooner than three years (i.e. as expeditiously as practicable.) Additionally, once stationary combustion equipment no longer qualifies for any exemption, the owner or operator must conduct a performance test using EPA test methods within 180 days and notify the Division of the results and whether emission controls will be required to comply with the emission limitations. This means that a source can fall into and out of having to comply with the emission limitation, monitoring, recordkeeping and reporting requirements of the rule if they satisfy the performance test requirements (i.e. the Division will not follow a “once in/always in” approach with respect to emission control requirements of exemptions.) Similarly, this 180-day period starts once the equipment is no longer exempt.

Monitoring, recordkeeping and reporting requirements

The Commission determined that affected stationary combustion equipment comply with certain monitoring, recordkeeping and reporting requirements by October 1, 2021. In order to provide clarity and regulatory certainty, many of the monitoring requirements adopted by the Commission incorporate by reference existing federal requirements and are consistent with rules in Moderate nonattainment areas in other states establishing RACT for these source categories.

The Commission is requiring CEMS or continuous emissions rate monitoring systems (“CERMS”) for boilers with a maximum design heat input capacity equal to or greater than 100 MMBtu/hr, lightweight aggregate kilns with a maximum heat input design capacity equal to or greater than 50 MMBtu/hr, and glass melting. CERMS may require a stack gas flow rate monitor, where necessary, in order to measure volumetric flow rate and mass emissions. Where stack gas velocity is extremely low, as may be the case for a glass melting furnace, flow can be measured using a Division approved calculation methodology if flow cannot be accurately measured using traditional differential pressure or ultrasonic flow measuring devices. Moreover, where measuring emission rates in terms of emissions per unit of heat input (i.e. lb/MMBtu), EPA Method 19 calculations may be used using the appropriate F factor (i.e. the ratio of combustion gas volumes to heat inputs).

Further, it is the Commission’s intent to allow electric utility boilers and stationary combustion turbines subject to the Acid Rain Program to use the quality assurance/quality control and data validation procedures in 40 CFR Part 75 for monitoring emissions to satisfy monitoring, recordkeeping and reporting requirements in this rule. Affected units that are subject to a NO_x emission limitation in an NSPS and use CEMS or CERMS to monitor compliance with that limit can use those monitoring, recordkeeping and reporting requirements to demonstrate compliance with this rule. Similarly, owners or operators of stationary combustion turbines using performance testing to demonstrate compliance with NO_x emission limitations of NSPS GG or KKKK may utilize those procedures for demonstrating compliance with the emission limitation in this rule. Where an initial performance test has already been conducted to determine compliance with NSPS GG or KKKK, it is not expected that another initial performance test must be performed for purposes of demonstrating compliance with Section XVI.D. Where an initial performance test has not been previously conducted, it must be completed by October 1, 2021 to demonstrate compliance.

For each initial or periodic test, sources should calculate the backup fuel's heat input for the calendar year prior to the year in which the performance test is required to determine if a test is required for each fuel or only for the primary fuel. Moreover, periodic performance tests must be conducted no more than 24 months apart.

With respect to the fuel flowmeter requirements, the Division reserves the right to audit quality assurance procedures with respect to manufacturer's instructions. The heat input measured and recorded by the fuel flowmeter is to be in the same unit of measurement as the applicable emission limitation. With respect to the quarterly or semi-annual reporting requirement, the Commission intended to only require that reports be submitted no less than semi-annually, but a source may submit quarterly reports in order to be consistent with existing reporting frequencies established in a permit and/or applicable NSPS or NESHAP.

With respect to the performance test reports, all performance test reports must compare average emissions determined by the performance test with the applicable emission limitation using the same number of significant figures as the emission limitation.

Incorporation by Reference in Sections XIX. and XVI.

§ 24-4-103(12.5) of the Colorado Administrative Procedure Act allows the Commission to incorporate by reference federal regulations. The criteria of §24-4-103(12.5) are met by including specific information, making the regulations available and because repeating the full text of each of the federal regulations incorporated would be unduly cumbersome and inexpedient. However, these regulations are included in the SIP in order to establish RACT, which must be included in the SIP to satisfy CAA Sections 172(c) and 182(b). Therefore, in order to comply with Part D of the CAA, the Commission has incorporated federal regulations in Sections XVI.D.5. and XIX.A. through D. by reference.

Additional Considerations

Colorado must revise its ozone SIP to address the ozone Moderate nonattainment area requirements. The CAA does not expressly address all of the provisions adopted by the Commission. Rather, federal law establishes the 8-hour ozone NAAQS and requires Colorado to develop a SIP adequate to attain the NAAQS. Therefore, the Commission adopted certain revisions to Regulation Number 7 to ensure attainment with the 2008 8-hour ozone NAAQS and satisfy Colorado's Moderate nonattainment area obligations, including those related to RACT. These revisions do not exceed or differ from the federal act due to state flexibility in developing nonattainment area SIPs; however, in accordance with C.R.S. § 25-7-110.5(5)(b), the Commission nonetheless determines:

- (I) The revisions to Regulation Number 7 address RACT requirements for major sources of VOC and NO_x in Colorado's ozone nonattainment area. Colorado's major sources of VOC and NO_x are subject to various and numerous NSPS or NESHAP, Regulation Number 7 RACT requirements, or RACT/beyond RACT analyses. The Commission revised Regulation Number 7 to include regulatory RACT requirements for Colorado's major sources of VOC and NO_x in the SIP. Specifically, the Commission adopted RACT requirements in Section XVI.D. for combustion equipment located at major sources of NO_x in the DMNFR. MACT DDDDD, MACT JJJJJJ, MACT ZZZZ, MACT YYYYY, NSPS Db, NSPS GG, NSPS KKKK, NSPS IIII, NSPS JJJJ, NSPS OOOO, NSPS OOOOa, and the compliance demonstration requirements in 40 CFR Parts 60 and 75 may apply to such stationary combustion equipment. However, the Regulation Number 7 revisions apply on a broader basis to specific existing stationary combustion equipment in the DMNFR.
- (II) The federal rules discussed in (I) are primarily technology-based in that they largely prescribe the use of specific technologies in order to comply. EPA has provided some flexibility in certain NSPS and MACT. Certain stationary combustion equipment with a lower heat input may trigger the combustion process adjustment work practice requirements of this rule.

- (III) The CAA establishes the 8-hour ozone NAAQS and requires Colorado to develop SIP revisions that will ensure attainment of the NAAQS. The ozone NAAQS was not determined taking into account concerns unique to Colorado. In addition, Colorado cannot rely exclusively on a federally enforceable permit or federally enforceable NSPS or NESHAP to satisfy Colorado's Moderate nonattainment area RACT obligations. Instead, Colorado must adopt applicable provisions into its SIP directly, as the Commission has done here.
- (IV) Colorado will be required to comply with the lower 2015 ozone NAAQS. These current revisions may improve the ability of the regulated community to comply with new requirements needed to attain the lower NAAQS insofar as RACT analyses and efforts conducted to support the revisions adopted by the Commission may prevent or reduce the need to conduct additional RACT analyses for the more stringent NAAQS.
- (V) EPA has established a January 1, 2017, deadline for this SIP submission. There is no timing issue that might justify changing the time frame for implementation of federal requirements.
- (VI) The revisions to Regulation Number 7, Sections XVI. and XIX. establish categorical RACT for major sources of VOC and/or NOx, and thus are necessary to satisfy RACT SIP requirements for Moderate nonattainment areas and are specific to existing emission points at major sources of VOC and NOx, allowing for continued growth at Colorado's major sources.
- (VII) The Revisions to Regulation Number 7, Sections XVI., and XIX. establish reasonable equity for major sources of VOC and/or NOx by providing the same categorical standards for similarly situated and sized sources.
- (VIII) If Colorado does not attain the 2008 ozone NAAQS by July 20, 2018 (Colorado has requested a 1-year clean data extension), EPA will likely reclassify Colorado as a serious ozone nonattainment area, which automatically reduces the major source thresholds from 100 tons per year of VOC and NOx to 50 tons per year; thus subjecting more sources to major source requirements. If EPA does not approve Colorado's SIP, EPA may promulgate a Federal Implementation Plan; thus potentially determining RACT for Colorado's sources. Either of these outcomes may subject others to increased costs.
- (IX) Where necessary, the revisions to Regulation Number 7 include minimal additional monitoring, recordkeeping, and reporting requirements that correlate, where possible, to similar federal or state requirements.
- (X) Demonstrated technology is available to comply with the revisions to Regulation Number 7. The revisions concerning major sources of VOC and/or NOx generally reflect current emission controls and work practices.
- (XI) As set forth in the Economic Impact Analysis, the revisions to Regulation Number 7 contribute to the prevention of ozone in a cost-effective manner.
- (XII) Although alternative rules could also provide reductions in ozone and help to attain the NAAQS, the Commission determined that the Division's proposal was reasonable and cost-effective. However, a no action alternative would very likely result in an un-approvable SIP and possibly an EPA FIP and/or sanctions.

As part of adopting the revisions to Regulation Number 7, the Commission has taken into consideration each of the factors set forth in C.R.S. § 25-7-109(1)(b).

Colorado must revise Colorado's ozone SIP to address the Moderate nonattainment area requirements. However, to the extent that C.R.S. § 25-7-110.8 requirements apply to this rulemaking, and after considering all the information in the record, the Commission hereby makes the determination that:

- (I) These rules are based upon reasonably available, validated, reviewed, and sound scientific methodologies, and the Commission has considered all information submitted by interested parties.
- (II) Evidence in the record supports the finding that the rules shall result in a demonstrable reduction of the ozone precursors VOC and NOx.
- (III) Evidence in the record supports the finding that the rules shall bring about reductions in risks to human health and the environment that justify the costs to implement and comply with the rules.
- (IV) The rules are the most cost-effective to achieve the necessary and desired results, provide the regulated community flexibility, and achieve the necessary reduction in air pollution.
- (V) The rule will maximize the air quality benefits of regulation in the most cost-effective manner.

R. November 15, 2018 (Sections I., II., VI., VIII., IX., X., XII., XIII., XVI., XVII., XIX., XX., and XXI.)

This Statement of Basis, Specific Statutory Authority, and Purpose complies with the requirements of the Colorado Administrative Procedures Act §§ 24-4-103(4), the Colorado Air Pollution Prevention and Control Act, C.R.S. §§ 25-7-110 and 25-7-110.5., and the Air Quality Control Commission's ("Commission") Procedural Rules.

Basis

On May 21, 2012, the Denver Metro/North Front Range ("DMNFR") area was designated as marginal nonattainment for the 2008 8-hour Ozone National Ambient Air Quality Standard ("NAAQS"), effective July 20, 2012, with an attainment date of July 20, 2015 (77 Fed. Reg. 30088). On May 4, 2016, the U.S. Environmental Protection Agency ("EPA") published a final rule that determined that DMNFR area failed to attain the 2008 8-hour Ozone NAAQS by the applicable marginal attainment deadline and therefore reclassified the DMNFR area to moderate, effective June 3, 2016. Due to the reclassification, Colorado must submit revisions to its State Implementation Plan ("SIP") to address the Clean Air Act's ("CAA") moderate nonattainment area requirements, as set forth in CAA § 182(b) and the final SIP Requirements Rule for the 2008 Ozone NAAQS (See 80 Fed. Reg. 12264 (March 6, 2015)). The SIP revision must include Reasonably Available Control Technology ("RACT") requirements for major sources of VOC and/or NOx (i.e., sources that emit or have the potential to emit 100 tons per year ("tpy") or more) and VOC source categories addressed by an EPA Control Techniques Guideline ("CTG").

Statutory Authority

The Colorado Air Pollution Prevention and Control Act, C.R.S. §§ 25-7-101, et seq., ("Act"), § 25-7-105(1) (a) directs the Commission to promulgate such rules and regulations necessary for the proper implementation and administration of a comprehensive SIP that will assure attainment and maintenance of national ambient air quality standards. § 25-7-301 directs the Commission to develop a program providing for the attainment and maintenance of each national ambient air quality standard in each nonattainment area of the state. § 25-7-106 provides the Commission flexibility in developing an effective air quality program and promulgating such combination of regulations as may be necessary or desirable to carry out that program. § 25-7-106(1)(c) and (2) also authorize the Commission to promulgate emission control regulations applicable to the entire state, specified areas or zones, or a specified class of pollution, and monitoring and recordkeeping requirements. Section 109(1)(a) authorizes the Commission to promulgate regulations requiring effective and practical air pollution controls for significant sources and categories of sources of air pollutants.

Purpose

In November 2016, the Commission determined that some major sources and CTG VOC source categories were adequately addressed under existing SIP requirements. The Commission also adopted new requirements for some major sources and CTG VOC source categories. In November 2017, the Commission adopted categorical RACT requirements for the oil and gas industry in response to EPA's Oil and Gas CTG. In July 2018, the Commission adopted categorical RACT requirements for combustion equipment at major sources that the Commission determined in 2016 were not addressed by SIP RACT requirements.

In this rulemaking, the Commission adopts SIP requirements that further support and complete Colorado's obligation as a moderate ozone nonattainment area to revise Colorado's SIP to include provisions that implement RACT for all major sources of VOC and/or NO_x and for all CTG VOC source categories in the DMNFR ozone nonattainment area. Specifically, the Commission adopts categorical RACT requirements for major source breweries, wood furniture manufacturing, and addresses EPA concerns with the industrial cleaning solvent, metal furniture surface coating, and miscellaneous metal surface coating requirements. The Commission also revises specific rule or reference methods incorporated by reference to add applicable citation dates. Last, the Commission adopts specific revisions in a SIP clean-up effort.

Further, the Commission corrects typographical, grammatical, and formatting errors found throughout Regulation Number 7.

Major source RACT

Colorado has major sources of VOC and/or NO_x in the DMNFR. Under marginal and moderate ozone nonattainment classifications, major sources are sources with the potential to emit greater than or equal to 100 tpy of NO_x or VOC. Many of the major sources analyzed in 2016 were already subject to regulatory RACT requirements in Colorado's SIP, individual RACT requirements established in federally enforceable permits as a minor source RACT requirements, or an applicable federal New Source Performance Standard ("NSPS") or National Emission Standard for Hazardous Air Pollutant ("NESHAP"). However, as a moderate nonattainment area, Colorado must include provisions in the SIP to implement RACT for Colorado's major sources. In November 2016, the Commission directed some major sources to submit RACT analyses to the Division, including two major source breweries. The Commission adopts in this November 2018, rulemaking categorical RACT requirements for major source brewing activities.

Major source breweries

The Commission adopts RACT requirements for owners and operators of breweries producing malt beverages and their brewery related operations at a major source VOC as of June 3, 2016, located in the DMNFR. In a moderate ozone nonattainment area, a major VOC source is one that emits or has the potential to emit greater than 100 tpy VOC. A brewery includes brewhouse, fermentation, aging, and/or packaging operations. Brewery related operations include operations that support the production of malt beverages such as wastewater management, container manufacturing, and ethanol distillation. The Commission established RACT for combustion equipment, including at breweries, in July 2018, in Regulation Number 7, Section XVI. The Commission now adopts a process loss limit and pollution prevention requirements for brewery packaging operations. These pollution prevention provisions include performance metrics to reduce product loss, operator training, and packaging equipment to reduce container breakage and product loss. The Commission also adopts wastewater management and treatment requirements for land application of wastewater. Lastly, the Commission adopts requirements for owners or operators to keep records of production, pollution prevention activities, and wastewater to demonstrate compliance with the operational requirements.

The largest VOC emissions sources inside a brewery are associated with packaging operations, including can, bottle, and other container fillers. Breweries can reduce VOC emissions by optimizing packaging operations. The process loss limitation is representative of packaging and filling optimization and, therefore, is an indicator, and potential driver, of the resulting VOC emission reductions. The process loss limitation does not include the railcar loading of beer concentrate that is shipped off-site for packaging. In this process, empty railcars are filled with beer concentrate held in beer concentrate receiving tanks after the aging process. The process loss from the automated loading of the beer concentrate from tanks into railcars is minimal and emissions from the filling of cans, bottles, kegs, or other containers are included with the emissions of the off-site packaging facility.

The process loss is calculated on calendar month and rolling 12-month bases across all packaging operations (i.e., filling lines), which aligns with existing product tracking programs. Process loss equates to the difference in the quantity of malt beverage metered at the filler and the quantity in containers as tracked for the Alcohol and Tobacco Tax and Trade Bureau ("TTB"). Operators determine the average calendar month process loss by comparing the total volumes metered at the fillers to the total volume counted by the TTB case counters. Owners or operators will then determine monthly average process loss percentage by dividing the difference in meter and case counter values by the total volume metered at the fillers. Utilizing an average process loss limit also allows for variations in individual line or brand product loss due to specialty brands or innovative containers. The brewing industry is seeing decreased sales of high-volume brands and increased consumer demand for small-volume unique or complex brands. This market change impacts process loss as the high-volume brands have low process loss values whereas specialty brands often result in higher process loss values due to brand recipe complexity, brand mix complexity, and production schedule complexity. The packaging of more types of brands and more complex brands result in higher process loss values because of differences in recipes that require more time for the filler to adjust to the appropriate fill level, more frequent product changeovers of the filling lines, and more unique packaging. The requirement to completely flush a filling line between brands also increases process loss values when the specialty brands are produced in lesser quantities than high-volume brands. Further, bottle filling lines often have different process loss values than can filling lines, therefore the change in container demand can impact the overall process loss. The average process loss limit of 6 percent on a calendar month and 4 percent on a 12-month rolling average leaves the necessary margin for variability and innovation, while still providing an indicator of RACT-level control of brewery packaging operations VOC emissions.

The Commission exempts from the process loss, pollution prevention, and recordkeeping requirements emissions units' subject to a work practice or emission control requirement in another federally enforceable section of Regulation Number 7 and emission units with total uncontrolled actual VOC emissions less than two tons per year. The first exemption was adopted to avoid subjecting sources to overlapping, duplicative, or contradictory RACT requirements. The second exemption was adopted for consistency with other major source RACT provisions and the use of Colorado's permitting thresholds for NOx and VOC to identify the emission points at major sources for which Colorado evaluated RACT.

The Commission also exempts equipment or activities related to research and development and newly installed, upgraded, or replaced packaging operations. Research and development activities include testing different recipes and packaging types before a product is distributed into commerce. The six-month startup exemption for newly installed, upgraded, or replaced packaging operations allows for the testing and adjustment of the new equipment to meet performance requirements. Examples of newly installed, upgraded, or replaced packaging operations include a new filling line or an upgraded or replaced man-to-machine-interface. Startup of newly installed, upgraded, or replaced packing operations does not include the startup or changeover of malt beverages or new recipes. Quality assurance teams follow a statistical process to verify that equipment is meeting quality standards prior to releasing salable product. These processes may include additional container testing, product sampling, or additional filler flushes while packaging operations are fine-tuned to meet key performance indicators. The volume of the product metered at the filler during the research and development and startup processes is excluded from the monthly process loss calculations. However, new, upgraded, or replaced packaging operations are not exempt from employees training requirements to ensure that employees understand the new packaging operations after startup.

Pollution prevention provisions also include the use and operation of packaging equipment to reduce container breakage and product loss. The Commission exempts from the automated filling equipment requirements packaging operations at pilot brewery operations. Automated filling equipment may be mechanical with a set fill quantity or electric with a flow meter and adjusting fill quantity. Both processes improve consistency, reduce spillage and product loss, and reduce the variation that may occur from human error.

The automated filling lines also include fill level detectors that will reject inadequately filled containers for recovery and recycling. A pilot brewery operation may serve the purposes of research and development but can also be utilized to produce very small quantities of product that is distributed into commerce. Pilot brewery operations can include different filling operations (e.g., bottles, kegs) but may use some manual filling related processes instead of automated processes. The use of manual processes is consistent with industry practices for operations of this small size, less than 50,000 barrels per year, and provides flexibility to account for production variations that may occur during research and development or small batch production.

Wood furniture manufacturing

In 2016, the Commission determined that only one source in the DMNFR exceeded the Wood Furniture CTG applicability threshold, and that source was a major source of VOC. Therefore, the Commission incorporated by reference requirements in 40 CFR Part 63, Subpart JJ (National Emission Standards for Wood Furniture Manufacturing Operations) into the SIP for wood furniture surface coating operations. In the 2008 Ozone NAAQS Implementation rule, EPA stated that states could streamline their RACT analysis by relating MACT controls to VOC RACT considerations. However, EPA has since expressed concerns that the NESHAP JJ volatile hazardous air pollutant ("VHAP") coating content limits may not adequately address coating VOC emissions. The Commission therefore removes the incorporation by reference of NESHAP JJ for wood furniture manufacturing operations in Section XIX. and is instead including the CTG recommended coating VOC content limits and work practices in Section IX.O.

The coating VOC content limits apply to sealers, topcoats, acid-cured alkyd amino vinyl sealers, or acid-cured alkyd amino conversion varnish topcoats. EPA's Wood Furniture CTG does not define acid-cured topcoats or sealers but does describe acid-catalyzed finishes as the most common catalyzed finishes. The Wood Furniture CTG further states that the film-forming resins in these finishes are usually a urea-formaldehyde or melamine-formaldehyde prepolymer mixed with an alkyd resin that serves as a plasticizer. Common catalysts contained in the acid-catalyzed finishes include sulfuric acid and p-toluenesulphonic acid and film formation occurs through curing (polymerization) of the resins rather than drying.

SIP Clean-up

Industrial Cleaning Solvent

In 2016, the Commission adopted provisions in Regulation Number 7, Section X. to include RACT requirements related to the use of industrial cleaning solvents. The Commission adopted several exemptions recommended by EPA's Industrial Cleaning Solvents CTG as well as exemption for sources complying with cleaning solvent requirements in a federally enforceable NSPS, NESHAP, Best Available Control Technology requirement, or Lowest Achievable Emissions Rate requirement, which was similar to an EPA approved exemption in Colorado's Regional Haze SIP. EPA has since indicated concerns with approving this broad exemption due to a perceived lack of specificity. The Commission therefore removes the broad exemption in Section X.E.4.a.(i).

Metal furniture and miscellaneous metal surface coating

EPA published Metal Furniture CTGs in 1977 and 2007 and Miscellaneous Metal Parts and Products CTGs in 1978 and in 2008. In the 2008 Ozone NAAQS Implementation rule, EPA stated that states could conclude that sources already addressed by RACT determinations for a previous ozone NAAQS do not need to implement additional controls because a new RACT determination would result in the same or similar control technology as the initial RACT determination and any incremental emissions reduction from the application of a second round of controls would be small and the cost unreasonable.

Therefore, in 2016 the Commission relied on the RACT provisions relating to the 1977 and 1978 CTGs adopted into Regulation Number 7, Sections IX.H. and IX.L. in 1978 and 1980 to continue to establish RACT for metal furniture and miscellaneous metal coating operations. EPA has since indicated concerns with the existing provisions due to a lack of specified application technique. The Commission therefore revises Section IX. to specify the use of good air pollution control practices, including efficient application methods.

1990 and 1991 RACT Reports

In 1990, the Commission adopted one of several requirements in Regulation Number 7, specifically Sections I.B.2.f. and I.B.2.g., for existing sources to address EPA concerns with the design, implementation, and enforceability of Colorado's previously submitted and approved Ozone SIP. The provisions included one-time reporting requirements concerning source emissions and RACT for sources existing as of 1989. The provisions were not an ongoing reporting requirement potentially necessary for monitoring compliance with applicable emissions limits. EPA approved these provisions into Colorado's SIP in 1995, without discussion. Due to these one-time requirements having passed and Colorado's major stationary sources being subject to RACT requirements in Regulation Number 7, as adopted by the Commission through 2018, the Commission removed these historic provisions. Removal of these provisions does not remove or modify any control measures, therefore does not affect emissions nor interfere with attainment or reasonable further progress. Where information in the Sections I.B.2.f. and I.B.2.g. reports informed RACT requirements under Section II.C., sources remain subject to applicable RACT requirements and any emission reporting requirements as addressed by the emission statement rule last approved by EPA in 2015 (See 80 Fed. Reg. 50205 (August 19, 2015)).

Incorporation by Reference

§ 24-4-103(12.5) of the Colorado Administrative Procedure Act allows the Commission to incorporate by reference federal regulations. The criteria of §24-4-103(12.5) are met by including specific information and making the regulations available because repeating the full text of each of the federal regulations incorporated would be unduly cumbersome and inexpedient. To fully comply with these criteria, the Commission included reference dates to rules and reference methods incorporated in Regulation Number 7, Sections II., VI., VIII., IX., X., XII., XIII., XVI., and XVII.

Additional Considerations

Colorado must revise its Ozone SIP to address the moderate ozone nonattainment area requirements. The CAA does not expressly address all of the provisions adopted by the Commission. Rather, federal law establishes the 8-hour ozone NAAQS and requires Colorado to develop a SIP adequate to attain the NAAQS. Therefore, the Commission adopted certain revisions to Regulation Number 7 to ensure attainment with the 2008 8-hour ozone NAAQS and satisfy Colorado's moderate nonattainment area obligations, including those related to RACT. These revisions do not exceed or differ from the federal act due to state flexibility in developing nonattainment area SIPs; however, in accordance with C.R.S. § 25-7-110.5(5)(b), the Commission nonetheless determines:

- (I) The revisions to Regulation Number 7 address RACT requirements for major sources of VOC in Colorado's ozone nonattainment area. Colorado's major sources of VOC are subject to various and numerous NSPS or NESHAP, Regulation Number 7 requirements, or RACT/beyond RACT analyses. The Commission revised Regulation Number 7 to include regulatory RACT requirements for Colorado's major sources of VOC in the SIP. Specifically, the Commission adopted RACT requirements in Section XX. for brewing activities located at major sources of VOC in the DMNFR. The Commission also adopted RACT requirements from EPA's Wood Furniture CTG for wood furniture surface coating in Section IX. MACT JJ may apply to wood furniture surface coating operations.
- (II) The federal rule discussed in (I) is primarily technology-based in that it largely prescribes the use of specific coating VHAP contents in order to comply. The federal rule provides flexibility by allowing subject facilities to select any coating meeting the specified VHAP content limits.
- (III) The CAA establishes the 8-hour ozone NAAQS and requires Colorado to develop SIP revisions that will ensure attainment of the NAAQS. The ozone NAAQS was not determined taking into account concerns unique to Colorado. In addition, Colorado cannot rely exclusively on a federally enforceable permit or federally enforceable NSPS or NESHAP to satisfy Colorado's moderate nonattainment area RACT obligations. Instead, Colorado must adopt applicable provisions into its SIP directly, as the Commission has done here.
- (IV) Colorado will be required to comply with the lower 2015 ozone NAAQS. These current revisions may improve the ability of the regulated community to comply with new requirements needed to attain the lower NAAQS insofar as RACT analyses and efforts conducted to support the revisions adopted by the Commission may prevent or reduce the need to conduct additional RACT analyses for the more stringent NAAQS.
- (V) EPA has established a January 1, 2017, deadline for this SIP. There is no timing issue that might justify changing this time frame.
- (VI) The revisions to Regulation Number 7, Sections IX., X., and XX. establish categorical RACT for major sources of VOC and CTG VOC source categories, and thus are necessary to satisfy RACT SIP requirements for moderate nonattainment areas. The provisions are specific to emission points at sources of VOC, allowing for continued growth at Colorado's sources.
- (VII) The Revisions to Regulation Number 7, Sections IX., X., and XX. establish reasonable equity for sources of VOC by providing the same categorical standards for similarly situated and sized sources.
- (VIII) If Colorado does not attain the 2008 ozone NAAQS by July 20, 2018 (Colorado has requested a one-year clean data extension) EPA will likely reclassify Colorado as a serious ozone nonattainment area, which automatically reduces the major source thresholds from 100 tons per year of VOC and NOx to 50 tons per year; thus subjecting more sources to major source requirements. If EPA does not approve Colorado's SIP, EPA may promulgate a Federal Implementation Plan; thus potentially determining RACT for Colorado's sources. Either of these outcomes may subject others to increased costs.
- (IX) Where necessary, the revisions to Regulation Number 7 include minimal monitoring, recordkeeping, and reporting requirements that correlate, where possible, to similar federal or state requirements.
- (X) Demonstrated technology is available to comply with the revisions to Regulation Number 7. The revisions concerning major sources of VOC generally reflect current emission controls and work practices.

- (XI) As set forth in the Economic Impact Analysis, the revisions to Regulation Number 7 contribute to the prevention of ozone in a cost-effective manner.
- (XII) Although alternative rules could also provide reductions in ozone and help to attain the NAAQS, the Commission determined that the Division's proposal was reasonable and cost-effective. However, a no action alternative would very likely result in an un-approvable SIP and possibly an EPA FIP and/or sanctions.

As part of adopting the revisions to Regulation Number 7, the Commission has taken into consideration each of the factors set forth in C.R.S. § 25-7-109(1)(b).

Colorado must revise Colorado's ozone SIP to address the moderate nonattainment area requirements. However, to the extent that C.R.S. § 25-7-110.8 requirements apply to this rulemaking, and after considering all the information in the record, the Commission hereby makes the determination that:

- (I) These rules are based upon reasonably available, validated, reviewed, and sound scientific methodologies, and the Commission has considered all information submitted by interested parties.
- (II) Evidence in the record supports the finding that the rules shall result in a demonstrable reduction of the ozone precursors VOC and NOx.
- (III) Evidence in the record supports the finding that the rules shall bring about reductions in risks to human health and the environment that justify the costs to implement and comply with the rules.
- (IV) The rules are the most cost-effective to achieve the necessary and desired results, provide the regulated community flexibility, and achieve the necessary reduction in air pollution.
- (V) The rule will maximize the air quality benefits of regulation in the most cost-effective manner.

S. December 19, 2019 (Sections I. through XX. and Appendices A through F – reorganized into Parts A through F)

This Statement of Basis, Specific Statutory Authority, and Purpose complies with the requirements of the Colorado Administrative Procedures Act §§ 24-4-103(4), the Colorado Air Pollution Prevention and Control Act, Colorado Revised Statutes (CRS) §§ 25-7-110 and 25-7-110.5., and the Air Quality Control Commission's (Commission) Procedural Rules.

Basis

During the 2019 legislative session, Colorado's General Assembly adopted revisions to several Colorado Revised Statutes in Senate Bill 19-181 (SB 19-181) (Concerning additional public welfare protections regarding the conduct of oil and gas operations) that include directives for both the Oil and Gas Conservation Commission and the Air Quality Control Commission (Commission). This proposed rulemaking focuses on the Air Quality Control Commission directives in § 25-7-109, CRS, SB19-181 directs the Commission to adopt regulations to "minimize emissions of methane and other hydrocarbons, volatile organic compounds (VOC), and oxides of nitrogen (NOx)" from all the "natural gas supply chain." Further, SB 19-181 identifies specific provisions the Commission should consider including semi-annual leak detection and repair (LDAR) inspection requirements at all well production facilities, transmission pipeline and compressor station inspection requirements, continuous methane emission monitoring requirements, and pneumatic device requirements. This rulemaking addressed many of the specific provisions for consideration, except continuous methane monitoring, but is only the first of many rulemakings to come in addressing SB 19-181.

Further, on August 15, 2019, the Environmental Protection Agency (EPA) proposed to reclassify the Denver Metro North Front Range (DMNFR) to Serious, after 2015-2017 ozone data failed to show attainment of the 2008 8-hour Ozone National Ambient Air Quality Standard (NAAQS) of 75 parts per billion (ppb). See 84 Fed. Reg. 41,674 (Aug. 15, 2019). As a Serious area, the major source threshold lowers from 100 tons per year (tpy) of VOC or NO_x to 50 tpy and the DMNFR's attainment date becomes July 20, 2021. EPA has also designated the DMNFR as Marginal nonattainment for the 2015 ozone NAAQS of 70 ppb, with an attainment date of August 3, 2021.

Therefore, as a first step to addressing the new statutory directives, and ensuring progress towards attainment of the 2008 and 2015 ozone NAAQS, the Commission is adopting revisions to Regulation Number 7 to minimize emissions from the oil and gas sector and to include reasonably available control technology (RACT) requirements for major sources with VOC and/or NO_x emissions equal to or greater than 50 tpy. The oil and gas industry is a significant source of VOC, NO_x, ethane, and methane emissions, and the Commission expects the industry's growth to continue in the foreseeable future. Improved technologies and business practices, many already utilized by Colorado oil and gas operators, can reduce emissions of hydrocarbons such as VOCs, ethane, and methane in a cost-effective manner. These technologies and practices include, without limitation, frequent LDAR inspections, reducing emissions from pneumatic controllers, reducing emissions from the transmission segment, storage tank measurement systems, and vapor collection and return equipment.

For these reasons and more, the Commission believes additional control measures beyond the current requirements in Regulation Number 7 and NSPS OOOO (and NSPS OOOOa) are appropriate. Colorado's considerable experience with the regulation of oil and gas sources involves both State Implementation Plan (SIP) requirements that apply in the DMNFR and state-only requirements that apply state-wide. In addition, evidence in the rulemaking record supports the conclusion that the rules can be implemented effectively. Accordingly, the Commission concludes that the rules are technologically feasible and cost-effective.

Statutory Authority

The Colorado Air Pollution Prevention and Control Act, §§ 25-7-101, CRS, *et seq.* (Act), specifically § 25-7-105(1), directs the Commission to promulgate such rules and regulations as are consistent with the legislative declaration set forth in § 25-7-102 and that are necessary for the proper implementation and administration of Article 7. The Act broadly defines air pollutant to include essentially any gas emitted into the atmosphere (and, as such, includes VOC, NO_x, methane and other hydrocarbons) and provides the Commission broad authority to regulate air pollutants.

Section 105(1)(a)(I) directs the Commission to adopt a state implementation plan (SIP) to attain the NAAQS. § 25-7-106 provides the Commission maximum flexibility in developing an effective air quality program and promulgating such combination of regulations as may be necessary or desirable to carry out that program. § 25-7-106 also authorizes the Commission to promulgate emission control regulations applicable to the entire state, specified areas or zones, or a specified class of pollution. § 25-7-106(6) further authorizes the Commission to require owners and operators of any air pollution source to monitor, record, and report information. §§ 25-7-109(1)(a), (2), and (3) of the Act authorize the Commission to promulgate regulations requiring effective and practical air pollution controls for significant sources and categories of sources, emission control regulations pertaining to nitrogen oxides and hydrocarbons, and emissions control regulations pertaining to the storage and transfer of petroleum products and other VOCs. § 25-7-109(2)(c), in particular, provides broad authority to regulate hydrocarbons. § 25-7-109(10) directs the Commission to adopt emission control regulations to minimize emissions of methane, other hydrocarbons, VOC, and NO_x from oil and gas operations.

Purpose

The following section sets forth the Commission's purpose in adopting the revisions to Regulation Number 7, and includes technological and scientific rationale for the adoption of the revisions. The Commission adopts revisions to Regulation Number 7 to address hydrocarbon emissions from oil and gas operations, including well production facilities and natural gas compressor stations. The Commission expands the inspection and enhanced response program for pneumatic controllers it adopted in 2017 for pneumatic controllers in the DMNFR to a state-wide applicability. The Commission adopts a new, innovative performance based program to reduce emissions from the downstream transmission segment.

The Commission is replacing the system-wide condensate storage tank control strategy in the SIP with a more straight-forward storage tank control threshold. The Commission is also seeking to reduce emissions from storage tank measurement and sampling and loadout activities, and to minimize fugitive emissions from leaking components at natural gas compressor stations and well production facilities. Further, the Commission is expanding the requirement to employ best management practices to minimize emissions at oil and gas wells during well plugging activities. The Commission is also establishing an annual emissions inventory report that oil and gas operators will submit to the Division, which will ensure accountability and assist the Commission in understanding the emissions of methane, ethane, VOC, CO, and NOx associated with different activities and equipment in oil and gas operations. The Commission believes that this combination of revisions is appropriate as a first step in minimizing emissions from oil and gas operations and continuing to make progress towards attainment of the ozone NAAQS.

The Commission is revising Regulation Number 7 to include provisions in the SIP that require the implementation of RACT for major sources (≥ 50 tpy NOx and/or VOC) including expanding existing requirements, incorporating federal requirements, including categorical RACT requirements, and requiring the submission of RACT analyses.

The Commission is also updating requirements for gasoline transport trucks, bulk terminals, and service stations to align with current federal requirements in a SIP clean-up effort.

The revisions also correct typographical, grammatical, and formatting errors found through the regulation.

The following explanations provide further insight into the Commission's intention for certain revisions and, where appropriate, the technological or scientific rationale for the revision.

Reorganization

Over the years, Regulation Number 7 has grown. In an effort to facilitate readability, and to better allow the regulated community to identify and understand the provisions governing their activities, the Division is proposing a full reorganization of Regulation Number 7 into parts. A table identifying the new section(s) along with the prior section/location is shown. This Statement of Basis and Purpose will refer to the reorganized section numbers in the discussion of revisions and new provisions.

Reorganized Regulation Number 7 Section	Regulation Number 7 Section (as of 11/15/2018)
Part A	
Part A, Section I.	I. Applicability
Part A, Section II.	II. General Provisions
Part A, Appendix A	Appendix A. Colorado Ozone Nonattainment or Attainment Maintenance Areas

Part B	
Part B, Section I.	III. General Requirements for Storage and Transfer of Volatile Organic Compounds
Part B, Section II.	IV. Storage of Highly Volatile Organic Compounds
Part B, Section III.	V. Disposal of Volatile Organic Compounds
Part B, Section IV.	VI. Storage and Transfer of Petroleum Liquids
Part B, Section V.	VII. Crude Oil
Part B, Section VI.	VIII. Petroleum Processing and Refining
Part B, Section VII.	XV. Control of Volatile Organic Compound Leaks from Vapor Collection Systems and Vapor Control Systems Located at Gasoline Terminals, Gasoline Bulk Plants, and Gasoline Dispensing Facilities
Part B, Appendix B	Appendix B. Criteria for Control of Vapors from Gasoline Transfer to Storage Tanks
Part B, Appendix C	Appendix C. Criteria for Control of Vapors from Gasoline Transfer at Bulk Plants (Vapor Balance System)
	Appendix E – deleted, paragraphs B and E moved into section, and references replaced with EPA Method 27

Part C	
Part C, Section I.	IX. Surface Coating Operations
Part C, Section II.	X. Use of Cleaning Solvents
Part C, Section III.	XI. Use of Cutback Asphalt
Part C, Section IV.	XIII. Graphic Arts and Printing
Part C, Section V.	XIV. Pharmaceutical Synthesis
Part C, Appendix D	Appendix D. Minimum Cooling Capacities for Refrigerated Freeboard Chillers on Vapor Degreasers
Part C, Appendix E	Appendix F. Emission Limit Conversion Procedure

Part D	
Part D, Section I.	XII. Volatile Organic Compound Emissions from Oil and Gas Operations
Part D, Section II.	XVII. (State Only, except Section XVII.E.3.a., which was submitted as part of the Regional Haze SIP) Statewide Controls for Oil and Gas Operations and Natural Gas-Fired Reciprocating Internal Combustion Engines
Part D, Section III.	XVIII. (State Only) Natural Gas-Actuated Pneumatic Controllers Associated with Oil and Gas Operations
Part D, Section IV. (State Only) Control of emissions from the transmission and storage segment	NEW
Part D, Section V. (State Only) Oil and Natural Gas Operations Emissions Inventory	NEW

Part E	
Part E, Section I.	XVI.A.-C. (natural gas fired reciprocating internal combustion engines in the 8-hour ozone control area) and XVII.E. (new, modified, existing, and relocated natural gas fired reciprocating internal combustion engines)
Part E, Section II.	XVI.D. Control of Emissions from Stationary and Portable Combustion Equipment in the 8-Hour Ozone Control Area
Part E, Section III.	XIX. Control of Emissions from Specific Major Sources of VOC and/or NOx in the 8-Hour Ozone Control Area
Part E, Section IV.	XX. Control of Emissions from Breweries in the 8-Hour Ozone Control Area

Part F	
	XXI. Statements of Basis, Specific Statutory Authority and Purpose

State Implementation Plan Revisions (Part D, Section I. (formerly Section XII.))

The Commission adopted several revisions to the SIP provisions that were previously found in Section XII. While not strictly necessary to comply with a particular CAA requirement pertaining to ozone, the revisions implement the mandate of SB 19-181, strengthen Colorado's Ozone SIP, and will achieve further reductions in ozone precursors and other hydrocarbons.

Applicability (Section I.A)

The Commission revised the applicability language of Part D, Section I. to clarify that all oil and gas operations at and upstream of the natural gas processing plant are subject to the provisions of Section I., as more specifically set forth in Sections I.A through L. The Commission also revised the applicability to ensure that storage tanks containing hydrocarbon liquids (e.g., condensate, crude oil) and produced water are subject to the provisions of Section I., which previously applied only to condensate storage tanks.

Further, under previous provisions, owners and operators of condensate storage tanks for which the APENs reflecting emissions from all operations were 30 tpy VOC or less were exempted from Section I. Given the challenges with attaining the ozone NAAQS, the number of tanks that were exempt under this provision, and the need for further reducing emissions from those tanks, the Commission removed this exemption.

However, the Commission retained the exemption from the system-wide control strategy in Section I.I. (formerly Section XII.I.) for owners or operators of natural gas compressor stations that do not also own or operator exploration and production facilities and the exemption in Section I.G. (formerly XII.G.) for owners or operators of natural gas processing plants. Owners or operators of these facilities must continue to control condensate storage tanks as specified in Sections I.I. and I.G. By retaining these exemptions, the Commission does not intend to exempt these facilities from any applicable requirements in Part D, Section II.

Storage Tank Controls (Section I.D)

In 2004, the Commission adopted the initial system-wide control strategy, which required operators to reduce emissions from their system of condensate tanks. The “system” was comprised of condensate tanks with uncontrolled actual VOC emissions equal to or greater than 2 tpy, and allowed operators to decide which tanks to control so long as emissions from the “system” were reduced by specified percentages. The system-wide control strategy involved complicated and often times confusing recordkeeping and reporting. Further, the system-wide control strategy had the unintended impact of disincentivizing operators to build new facilities without storage tanks (a real emissions benefit), because operators could not take credit for the production at tankless facilities in their “system.” As a result, the Commission replaced the system-wide control strategy with a straightforward control threshold. Operators in the 8-hour Ozone Control Area will have until May 1, 2020, (prior to summer ozone season 2020) to install controls on storage tanks with uncontrolled actual VOC emissions equal to or greater than 2 tpy. Only the requirements for storage tanks with uncontrolled actual VOC emissions equal to or greater than 4 tpy are included in the SIP, while the requirements for the storage tanks between 2 and 4 tpy will remain state-only. This provision expands the control requirements to crude oil and produced water tanks, and will result in several hundred more tanks being controlled. The Commission has reviewed the evidence and has determined that the 4 tpy SIP threshold and implementation timetable is cost-effective, technically feasible, and will ensure no backsliding as provided for in the Clean Air Act, Section 110(l). In Sections I.D.3.b.(v) and I.D.3.b.(vi), the Commission has required that storage tanks below the 2 tpy threshold that increase emissions above the threshold must be in compliance with 60 days of the first date of the month after which the threshold was exceeded. As a result, if a storage tank exceeds the 2 tpy threshold in September 2020, based on a rolling twelve-month total (*i.e.*, October 2019-September 2020), the tank must have controls installed and operating within 60 days of October 1, 2020. These provisions will not only minimize emissions from storage tanks but will ensure clarity in the applicability of control requirements and will assist Colorado in making additional progress towards attainment of the ozone NAAQS.

The Commission has also determined that storage tanks that cannot install controls by the applicable compliance date may shut-in all wells producing to the applicable storage tanks, so long as production from any well producing into the storage tank is not resumed until controls are installed. It is the Commission’s intent that this allowance not apply unless the operator shuts in all wells feeding in to the storage tank/battery requiring controls. This will avoid the need for operators to install control equipment when wells are shut-in and where the operator may determine not to return those wells to production. Further, the Commission intends that the Division will work with operators in the DMNFR to allow for appropriate time to conduct design analyses to comply with Sections I.C.1.b. and II.C.2.a., as long as operators install required controls by May 1, 2020, and are pursuing compliance with reasonable diligence.

The Commission has also included in the SIP in Sections I.D.2.a. and II.C.1.b.(ii) the existing requirements (formerly Sections XII.D.1. and XVII.C.1.c.) that operators of newly constructed tanks employ controls during the first 90 days after the date of first production (this provision was previously designated state-only). However, these revisions to Regulation Number 7, in conjunction with revisions to Regulation Number 3, use the term “commencement of operation” instead of “date of first production.” This SIP revision is not part of Colorado’s ozone attainment requirements but is directed at making this requirement enforceable by the EPA and members of the public under the CAA. While the Commission does not believe inclusion of this provision in the SIP was required for compliance with Colorado’s permitting program in Regulation Number 3 with CAA requirements, including ozone nonattainment area requirements, pursuant to § 25-7-105.1(1), CRS, including this provision in the SIP will avoid confusion as to whether compliance with this requirement can be considered a limitation upon a source’s potential to emit for purpose of permitting.

Storage Tank Monitoring (Section I.E)

The Commission revised Section I.E. to apply the monitoring requirements to all storage tanks controlled pursuant to Section I.D., which will ensure monitoring not only of condensate tanks, but also of crude oil and produced water tanks on a weekly basis. The required inspections have also been updated to include common-sense elements that can have a real impact on performance of well production facility equipment and can reduce emissions. For example, checking that burner trays are not visibly clogged can improve the performance of air pollution control equipment. The Commission does not intend that operators should shut-in the combustor for the sole purpose of performing this inspection to observe the burner tray, and need only inspect those portions of burner trays that are visible without shutting in. The Commission also adopted into Section I.E. requirements that previously existed in Section II. (formerly Section XVII.) to check that pressure relief valves are properly seated and that vent lines are closed. Similarly, to the inspection in Section II.C.1.d.(i), operators are not expected to disassemble or otherwise manipulate the pressure relief valve to complete the inspection, unless the visual observation of the valve reveals it is unseated and corrective action needs to be taken. Further, the Commission does not expect operators to climb on top of a tank to observe the pressure relief valve. However, operators are expected to use an available catwalk or similar permanent access to ensure the best opportunity for inspection, except when a catwalk is not accessible due to a safety hazard.

The Commission has removed references to recordkeeping from Section I.E. and has attempted to condense all recordkeeping requirements in Section I.F. For example, Section I.E.2.c.(iv) no longer provides that operators must “check for and document” the inspection; instead, Section I.E.2.c. requires operators to “check”, and the requirement to “document” the inspection is found in Section I.F.2.c.

Recordkeeping and Reporting (Section I.F)

As a result of replacing the system-wide control strategy with the fixed control threshold, the Commission revised the recordkeeping and reporting requirements for demonstrating compliance with Section I.D. Operators subject to the system-wide control strategy will still be required to submit an annual report for calendar year 2019 by the same deadline of April 30, 2020, and are given until August 31, 2020, to submit the report for the time period in 2020 during which the system-wide control strategy remains effective (*i.e.* January 1 – April 30, 2020). In Sections I.F.2. and I.F.3., the Commission has created a new recordkeeping and reporting scheme for the tanks subject to the new control threshold provisions. The Commission has largely maintained the same recordkeeping and reporting requirements for the monitoring provisions in Section I.E. However, the Commission streamlined the new storage tank recordkeeping and reporting requirements, which are included in the SIP for storage tanks at or above the 4 tpy threshold, but are included on a state-only basis for the storage tanks between 2 and 4 tpy.

Miscellaneous

The Commission adopted revisions to definitions (Section I.B.) and the general provisions (Section I.C.). A new definition for “commencement of operation” was added for consistency with Regulation Number 3 and for clarity as to the applicability of other control requirements (previous versions of Regulation Number 7 were tied to the “date of first production,” which was not implemented consistently amongst operators). The Commission adopted the term “date of first production” in 2014 with the intent that it coincides with the date reported to the Colorado Oil and Gas Conservation Commission (COGCC) on COGCC Form 5A. Through implementation of the 2014 revisions, differences between the Commission’s and the COGCC’s use of the term were realized. Therefore, the Commission has replaced “date of first production” with the more clearly defined “commencement of operation” term.

The Commission also adopted new definitions for “hydrocarbon liquid,” “produced water,” “storage tank,” and “storage vessel” to ensure consistency with the state-only program in Part D, Section II. The definition of “storage tank” referred to the federal definition of “storage vessel” and, therefore, captured crude oil and produced water tanks, in addition to condensate tanks. The federal definition has now been included as a standalone definition of “storage vessel.”

The Commission also revised Section I.C.1.b. to reflect that Section I. now applies to oil and gas operations collecting, storing, processing, and handling hydrocarbon liquids and produced water, not just condensate. The Commission replaced the term “leakage” with the term “emission” in order to be consistent with the Common Provisions definition of “emission.” The Commission does not intend this latter revision to reflect a change in the meaning or applicability of Section I.C.1.b. (or Section II.B.1.a., where this revision is also made), but only to improve clarity.

The Commission revised Section I.C.2., which specifies how operators must calculate emissions and emission reductions for purposes of demonstrating compliance with the control requirements. These revisions expand the current provisions to storage tanks storing hydrocarbon liquids other than condensate and to storage tanks storing produced water. For crude oil tanks and produced water tanks, operators will need to refer to default emission factors as established and updated by the Division. See, e.g. PS Memo 14-03, *Oil & Gas Industry Crude Oil, Condensate and Produced Water Atmospheric Condensate Storage Tanks, Regulatory Definitions and Permitting Guidance for General Permit GP08*.

The Commission has not substantively revised the LDAR SIP provisions of Section I.L. but clarified that applicability is based on emissions on a rolling twelve-month basis, not a calendar year basis. Such was the Commission’s intention in adopting the program in 2017.

The Commission has also determined to incorporate Section II.F. (formerly Section XVII.G.) into the SIP. This provision requires control of emissions coming off a separator after a well is newly constructed, hydraulically fractured, or recompleted. These emissions must be routed to a gas gathering line or controlled by air pollution control equipment. This SIP revision is not part of Colorado’s ozone attainment compliance requirements, but is directed at clarifying that this requirement is enforceable by the EPA and members of the public under the CAA. Including this provision in the SIP will avoid confusion as to whether compliance with this requirement can be considered a limitation upon a source’s potential to emit for purposes of permitting. See § 25-7-105.1(1), CRS.

State-wide, State-Only Revisions (Part D, Section II. (formerly Section XVII.))

In Part D, Section II., the Commission adopted several revisions to begin its implementation of SB 19-181. These revisions further support existing control requirements and also seek reductions from previously unregulated emissions activities (e.g., gauging and loadout).

Storage Tank Controls, Monitoring, Recordkeeping, and Reporting (Sections II.C.1.c., II.C.1.d., II.C.2.b. and II.C.3.)

Since 2011, Colorado has made significant progress in reducing emissions from storage tanks. However, storage tanks remain the largest source not only of oil and gas VOC emissions, but of all anthropogenic VOC emission sources in the state (per the 2017 nonattainment area emissions inventory in the Moderate area ozone nonattainment SIP). The Commission has determined that it is cost effective and technically feasible to lower the control threshold from 6 tpy VOC (as established in 2014) to 2 tpy VOC. However, the Commission does not want to facilitate or encourage the use of supplemental fuel to operate control equipment, and understands that this can occasionally be an issue on the West Slope, in particular, where the facilities have lower pressure. The Commission has therefore adopted a provision that allows operators to seek from the Division an exception to controlling tanks between 2 and 6 tpy VOC under these circumstances. Exceptions should be sought prior to compliance deadlines, and will be effective upon submittal unless and until the Division determines an exception is not appropriate. Storage tanks constructed on or after March 1, 2020, must have controls upon commencement of operation, ensuring reductions during the 2020 summer ozone season. Storage tanks outside the nonattainment area constructed prior to March 1, 2020, must be in compliance by May 1, 2021. The Commission determined it was appropriate to give tanks outside the nonattainment area between 2 and 6 tpy VOC extra time to install controls. The Commission does not intend to give extra time to storage tanks with air pollution control equipment already installed, even where controls are not currently required by Regulation Number 7 (e.g., where an operator has submitted an APEN claiming controls).

The Commission revised the approved instrument monitoring method (AIMM) schedule for inspections of controlled storage tanks to align with the Commission's revision of the LDAR inspection frequencies in response to SB 19-181, discussed further. The Commission adopted a semi-annual frequency for storage tanks with emissions greater than or equal to 2 tpy and less than or equal to 12 tpy. For storage tanks with emissions greater than or equal to 6 tpy and less than or equal to 12 tpy, this is an increase in inspection frequency from annual to semi-annual. Where the Commission specifies that semi-annual monitoring must "begin" in a certain year, the Commission intends that there be at least two AIMM inspections during that year. The Commission also removed the phase-in schedule for storage tanks inspections (within 90 days of January 1, 2016 for storage tanks ≥ 6 and within 30 days for storage tanks > 50 tpy) as those schedules have passed. The Commission updated the recordkeeping requirements for AIMM inspections to be consistent with the LDAR recordkeeping in Section II.E. Records of AIMM inspections under Sections II.C. and II.E. may be maintained together, and need not be kept separately.

The Commission has also strengthened monitoring requirements for storage tanks and associated equipment. In Section II.C.1.d., the Commission has determined that it is cost effective and feasible, while already on-site for visual inspection, to check the dump valve on the separator to ensure that it is not stuck open or visibly clogged. The Commission does not intend that operators will need to manipulate equipment or stay on-site for the purpose of observing actuation of the dump valve for purposes of this inspection requirement. The Commission has also determined that excess liquids in the vapor lines can cause a multitude of problems, including over pressurization of the tanks or smoking flares. Therefore, the Commission is directing operators to check liquid knockout vessels, when present, unless the vessel is set up to drain automatically, and to drain liquids if above the low-level indication point. If the knockout vessel is not equipped with a liquid level indicator, operators can comply with this requirement by draining the knockout vessel during the inspection. Further, for underground lines and above-ground lines where no knockout vessel is used, operators should establish a procedure by which they evaluate for the presence of liquids in the vapor lines, and drain as necessary. Appropriate operating and maintenance program documents should set forth this procedure so as to provide clarity on how an operator determines draining is necessary. These actions can be taken while the operator is already on-site for the inspections previously required, are consistent with actions the Commission generally understands operators are already taking in the field and therefore, the Commission does not expect these actions to create additional burden.

The LDAR program in Section II.E. (formerly Section XVII.F.) has required remonitoring following repair of a leak (as has Section I.L.). However, Section II.C. did not include an explicit remonitoring requirement following actions taken to address venting from storage tanks. Operators must now confirm that actions taken to address venting were effective through remonitoring. This confirmation must be made within 24 hours of the action taken to address the venting. This requirement does not reflect a timeframe in which the operator may address the venting without incurring liability for the violation. There is currently no regulatory period in which venting will not be considered a violation of Section II.C.2.a., unless the venting is reasonably necessary for one of the reasons expressly contemplated by Section II.C.2.a. Only where the initial emissions observation was observed through AIMM does the success of the response action need to be verified through AIMM. However, the Commission believes that if the venting was found with an IR camera and was addressed while the IR camera operator was on-site, then there is little to no burden to use the IR camera to confirm, for example, an effective seating of the thief hatch upon closure. In Section II.C.3.f., the Commission has established supplemental recordkeeping requirements when venting is observed and addressed.

In Section II.C.3.d., the Commission has strengthened recordkeeping requirements of inspections under Section II.C.1. These recordkeeping requirements are consistent with the recordkeeping required in Section I.F. (formerly Section XII.F.). The Commission has maintained the exemption from recordkeeping under Section II.C.3.b., for instances where venting is reasonably necessary for maintenance, gauging (unless a storage tank measurement system is required under and the operator complies with Section II.C.4.), or safety of personnel and equipment. However, the Commission expects that the emissions associated with these venting events will be reported in the annual emissions inventory.

Storage Tank Measurement Systems (Section II.C.4.)

Historically, operators have needed – for operational purposes – to open the thief hatch on storage tanks in order to sample and measure the level of the liquid to be sold (i.e., to determine quality and quantity). Technology has advanced over the past few years, including, without limitation, the use of Lease Automatic Custody Transfer (LACT) units, automated tank gauges, and the development of API 18.2 (Custody Transfer of Crude Oil from Lease Tanks Using Alternative Measurement Methods), which allow for the sampling and measurement of liquids without opening the thief hatch. It is the Commission's intention that owners and operators of facilities and tanks constructed after the deadlines in new Section II.C.4. must measure the level of the liquid (e.g., use tank level sensors) and sample the liquids (e.g., check for temperature, BS&W, and other indicia of merchantability) without opening the thief hatch. These storage tank measurement systems can be employed at facilities with and without automation.

Further, a significant number of operators have already deployed such systems at large and small facilities in the DJ Basin, in some cases voluntarily and in some cases as required pursuant to a Consent Decree or Compliance Order on Consent. The Commission notes that a storage tank management system may be different for tanks where liquids are both sampled and measured than for tanks where liquids are not sampled. For example, Commission understands that some produced water tanks are not sampled for quality, and therefore do not need to have equipment to allow for the sampling of the liquids without opening of the thief hatch.

Therefore, the Commission adopted a requirement to employ storage tank measurement systems to determine the quantity of the liquid at well production facilities, natural gas compressor stations, and natural gas processing plants constructed on or after May 1, 2020. Any such facilities that are constructed after January 1, 2021, must have storage tank management systems in place that determine both the quality and the quantity of the liquid. This requirement also applies to storage tanks at existing well production facilities, natural gas compressor stations, and natural gas processing plants that are modified by adding storage tanks. When operators add new storage vessels to existing facilities (e.g., to add capacity because production or throughput is expected to increase), they must outfit the new storage vessels and retrofit the existing vessels in the same battery with a storage tank management system. However, the ability to retrofit an existing battery may not exist, and is therefore not required, where a single storage tank is replaced due to maintenance concerns or where a tank is installed to provide extra head space in the vapor control system, but no production increase is associated with the installation.

The Commission has adopted minimal recordkeeping provisions for this requirement, including a description of the storage tank measurement system and records of the annual training program. The description must be sufficiently detailed to enable the Division to determine whether the operator is in compliance (e.g., sampling the liquids without opening the thief hatch). If an operator relies on a third party (e.g., hauler) to perform the gauging activities, those operators will need to work with the haulers to facilitate the training that will familiarize haulers with this new requirement.

The Commission has also adopted a requirement to allow for periodic calibration and testing of the storage tank measurement system. The Commission recognizes that while the Bureau of Land Management expressly allows for automatic tank gauging (see e.g. 42 C.F.R. Section 3174.3(33), incorporating by reference API 18.2), it can be necessary to test and calibrate the automatic tank gauging system. See 42 C.F.R. Section 3174.6(b)(5)(ii)(B). It is not the Commission's intent to adopt requirements at odds with the Bureau of Land Management. Further, some manufacturers may recommend inspection, testing, or calibration more frequently than specified by the Commission; the Commission intends to allow for those maintenance procedures, as reasonably necessary (i.e., the exception should not render ineffective the Commission's intent that thief hatches remain closed during the sampling and measurement process). Operators that perform maintenance procedures more frequently than semi-annually need to document the manufacturer's recommendation for the increased frequency and provide those materials to the Division upon request.

Hydrocarbon Liquids Loadout (Section II.C.5)

In Section II.C.5., the Commission has adopted new requirements to control or avoid emissions associated with the unloading of hydrocarbon liquids into transport vehicles (e.g., trucks). These requirements do not apply to produced water loadout. The Commission has determined to prohibit the venting of hydrocarbons during loadout activities, because the venting is not reasonably necessary within the meaning of Section II.C.2.a.; however, the Commission notes that some thief hatches may be “open” during loadout but are not emitting and are instead operating only as vacuum relief for the storage tank. An “open” pressure relief device that does not emit, but instead creates a vacuum, would not be a violation of the prohibition on venting during loadout, though the burden will remain on operators to demonstrate that any open pressure relief devices are not venting.

These requirements will apply to well production facilities, natural gas compressor stations, and natural gas processing plants constructed before and after May 1, 2020, with annual hydrocarbon liquid loadout throughput equal to or greater than 5,000 barrels per year, on a 12-month rolling basis. Throughput is based on the throughput of liquids loaded out to transport vehicles and does not include liquids loaded out to pipeline. Facilities constructed after May 1, 2020, must control emissions from loadout upon commencement of operation if they anticipate having a loadout throughput over 5,000 barrels per year. Facilities that are modified (e.g., new well drilled, well re-fracked or recompleted) that expect to have throughput over 5,000 barrels per year must also control loadout operations upon commencement of operation following the modification. Facilities that increase throughput such that loadout throughput reaches 5,000 barrels must control the emissions from loadout upon reaching 5,000 barrels. The Commission does not intend that operators may loadout more than 4,999 barrels of hydrocarbon liquids without controls. Thus, if an operator currently loads out to pipeline, and is not subject to this requirement, but the pipeline becomes unavailable (e.g., due to maintenance, whether scheduled or unscheduled) and the operator has 6,000 barrels stored in tanks, the operator must control the emissions from the loadout to transport vehicles or wait to loadout to transport vehicles until it can arrange for controls.

The Commission recognizes that compliance may be more cost effective at newly constructed facilities for several reasons. Operators may account for the vapors associated with loadout in the initial evaluation of air pollution control equipment required. Operators may also design the facility to make compliance easier, with both these requirements and Section II.C.4. However, the Commission has determined that it is also cost-effective and technically feasible to retrofit existing facilities to control loadout emissions. Operators using air pollution control equipment to control loadout emissions must also comply with other Regulation Number 7 requirements applicable to air pollution control equipment (e.g., inspections, recordkeeping). Further, if operators employ vapor collection and return systems, operators should include this vapor source in the engineering evaluation of their storage tanks and vapor control systems to avoid over-pressurizing the tanks.

The Commission has also established additional requirements to ensure the effective control of loadout emissions, including many requirements that the Division has previously established as permit RACT (under Regulation Number 3 and not as categorical RACT used for ozone SIP purposes) in loadout permits. The Commission determined that observation of and/or training and signage related to the loadout process by operators will help ensure that new staff and third parties are effectively implementing these requirements. The Commission directed the Division to develop a template and/or guidance regarding expectations for signage. However, if tanks are loaded out less frequently than monthly, the observation needs to take place during loadout when it does occur, unless observation is not feasible. If observation is not feasible (e.g., the operator did not receive notice of the loadout, which occurred during the middle of the night when no operator personnel was on site), the operator must inspect the facility within 24 hours to ensure that loadout equipment was properly stored and that thief hatches were closed. The Commission encourages the Division to work with operators to better understand when observation is, or is not, feasible.

Leak Detection and Repair (Section II.E)

In SB 19-181, the Legislature directed the Commission to minimize emissions from the oil and gas sector, including the gathering and boosting segment (i.e., compression). In conjunction with this directive, SB 19-181 further instructed the Commission to consider semi-annual monitoring for leaks at well production facilities. Therefore, the Commission has revised the LDAR program of Section II.E. (formerly Section XVII.F.) to increase the frequency of approved instrument monitoring method (AIMM) inspections to semi-annual at compressor stations with emissions between 0 and 12 tpy VOC and at well production facilities with emissions between 2 and 12 tpy VOC. Phase-in of these new inspections begins in 2020, and the Commission expects that operators will conduct the first semi-annual inspection prior to the start of the summer ozone season (i.e., May 1, 2020). Current requirements in place for larger facilities to inspect on a more frequent basis remain unchanged.

The Commission adopted a proposal to require enhanced leak detection and repair requirements for facilities within 1,000 feet of an occupied structure. The commission also directed the Division to work on a proposal that would speed up repair times in these areas and bring forward for the Commission's consideration in a future rulemaking hearing as soon as possible.

There are no other substantive changes to the existing LDAR program.

Emissions Associated with Well Maintenance, Unloading, and Plugging Activities (Section II.G)

In 2014, the Commission adopted a requirement that operators use best management practices (BMPs) to minimize hydrocarbon emissions and the need for well venting associated with well liquids unloading and well maintenance. The Commission is replacing the term "venting" with "emissions" or "emitting" to ensure consistency with the Common Provisions definition of "emission" and to avoid any confusion with the new definition of "venting" that was added to Section II.C.2.a.(i) (formerly Section XVII.C.2.a.(i)) in 2017, though no change in meaning or applicability is intended. The Commission has determined that BMPs should also be employed to reduce emissions from the well associated with well plugging activities. These activities have been increasing in frequency in the DMNFR in recent years, and the Commission finds that BMPs are a cost-effective and flexible proactive strategy to address this emerging emissions source. BMPs include both practices that reduce the need for well liquids unloading or well maintenance activities and practices that reduce or control emissions resulting from the well maintenance, well liquids unloading, and well plugging activities.

The Commission has also clarified and strengthened the recordkeeping and reporting requirements associated with the well emissions and BMPs. The inventories that will be required to demonstrate attainment with the ozone NAAQS in future SIPs necessitate detailed information on the emissions associated with these activities. Further, understanding BMPs employed to reduce or eliminate these emissions will assist the Commission in developing both voluntary and regulatory strategies to make further progress towards attainment. In an effort to minimize duplication with the new emissions inventory in Section V., the Commission intends that all information associated with activities covered by this Section II.G. will be reported on a separate form and not as part of the Section V. inventory. While recordkeeping is to begin in July 2020, the Commission understands that current methods of reporting emissions from these activities may need to be updated or improved in the future, and the Commission directs the Division to work with stakeholders to update emission factors and/or calculation methods as necessary.

Miscellaneous

Section II.C.2.a. prohibits the venting of hydrocarbons, unless reasonably required for maintenance, gauging, or safety. The Commission now clarifies that venting during gauging is expressly prohibited under this requirement where a storage tank measurement system is required under Section II.C.4. If Section II.C.4. allows for the opening of the thief hatch, that activity will not be considered venting within the meaning of Section II.C.2.a.

The Commission has revised Section II.C.2.b.(i), to reflect its intention in adopting the STEM provisions in 2014. The Commission intended in 2014, and specifically noted in the Statement of Basis and Purpose at that time, that STEM plans should include an analysis of the engineering design of the storage tank and associated air pollution control equipment (i.e., the vapor control system) to ensure that storage tanks are not over pressurized, causing excess emissions. The Commission believes that operators now largely understand and comply with this requirement, but has clarified the language in the rule itself principally to aid operators that may be new to the control program as a result of the new, lower control threshold. The Commission notes that this requirement does not require that operators maintain a site-specific design analysis for each facility. Worst-case design analyses or like-kind design analyses for similarly configured facilities may be utilized; however, the burden remains with the operator to show that the design analysis provided for the facility demonstrates adequacy of design.

Further, the Commission acknowledges that closed-loop tank pressure control systems designed to maintain tank pressures below a specified point can be, if designed and operated properly, indicative of adequate design. The Commission also acknowledges that design analyses do not need to be maintained within the STEM plan itself, so long as the STEM plan contains a description of the design analysis method employed and specifies the name and location of the design analysis for each facility covered by that STEM plan.

Pneumatic Controllers (Part D, Section III.)

SB 19-181 also directed the Commission to consider a requirement to reduce emissions from pneumatic devices. In the 2017 emissions inventory for the Moderate area ozone nonattainment SIP, pneumatic devices were identified as the second largest oil and gas area source (after tanks). In 2017, the Commission convened the Statewide Hydrocarbon Emission Reduction (SHER) team, to consider measures – both regulatory and voluntary – to reduce hydrocarbon emissions from the oil and gas sector. The Commission, at the same time, also established the Pneumatic Controller Task Force (PCTF), with a mission to collect and review data about pneumatic controllers and identify ways to reduce emissions from that equipment. After almost two years of work, the SHER team developed an early recommendation concerning pneumatic controllers, which the Commission has now adopted.

The SHER team supported a three-prong approach. First, the expansion of the pneumatic controller inspection and enhanced response program state-wide. Second, the SHER team recommended including language in this Statement of Basis and Purpose, directing the continued work to evaluate the use of zero-bleed pneumatic devices. Third, the SHER team supported a compliance assistance approach for operators outside the nonattainment area, while those operators get up to speed on the pneumatic controller inspection and enhanced response program that has been implemented in the nonattainment area since 2018.

The Commission approves of this approach and commends both the SHER team and PCTF for their work since 2017, building the knowledge that informed provisions of this rulemaking. The Commission has therefore expanded the pneumatic controller inspection and enhanced response program state-wide. At the same time, the Commission recognizes that there is much to learn about the inspection and maintenance of natural gas-driven pneumatic controllers outside the nonattainment area, which highlights the need for enforcement discretion. The Commission intends that for operations outside the nonattainment area, the determination of whether a pneumatic controller is operating properly will be made by the owner or operator, with minimal oversight by the Division for the first year of implementation.

The Commission further directs the SHER team and PCTF to continue their work on the mandates established in 2017, and to bring back to the Commission in 2020 their recommendations on the use of zero-bleed pneumatic devices. Specifically, the Commission continues to direct the PCTF to make recommendations on its findings in a report to the Commission in May 2020. However, the Commission revises its directive to the SHER team to present recommendations by no later than January 2020, to by no later than July 2020. This revised timeline will provide additional time for the SHER team to make any additional recommendations on cost-effective hydrocarbon emission reduction strategies evaluated by the SHER team. The Commission anticipates that the SHER team will also evaluate continuous methane emission monitoring and engage in discussions to determine actual leak rate percentages of components at oil and gas facilities for use in future rulemakings.

Downstream transmission (Part D, Section IV.)

SB 19-181 also directed the Commission to consider adopting a requirement that owners and operators of oil and gas transmission pipeline and compressor stations inspect and maintain all equipment and pipelines. The Commission's Regulation Number 7 has not historically regulated the transmission and storage segment, which includes pipeline, compressor stations, and other equipment transporting and storing natural gas downstream of the natural gas processing plant and prior to the distribution segment. Transmission pipelines, however, have been subject to federal and state pipeline safety regulations.

To address the new directive to minimize emissions from the transmission segment, the Commission adopted an innovative program that directs the setting of a methane intensity target and associated programmatic framework. This approach is the second recommendation from the SHER team, and again comes before the January 2020 deadline established by the Commission in November 2017. SHER team stakeholders involved in developing this program include trade associations, transmission segment operators, environmental and citizen groups, local governments, and the Division. The Division will approve a steering committee charter that will detail the purpose, responsibilities, and deliverables of the steering committee. The steering committee will develop an emissions protocol detailing the calculation and reporting of VOC, CO, NOx, ethane, and methane emissions and any associated program guidance documents or templates by September 30, 2020, determine a segment methane emissions intensity target by October 1, 2023, and certify initial target compliance based on the 2024 data. Each owner or operator in the segment will develop a company-specific best management practice (BMP) plan, the elements of which are enforceable by the Division. A goal of this program is continual improvement over time through review of BMPs, assessment of reported emissions and emissions intensity, and analysis of other data and best practices. In furtherance of this goal, the steering committee will periodically reassess the emissions intensity target and may consider, among other factors, the potential to reduce emissions from events beyond the control of the owner or operator.

The Division will provide an update on the development of the program to the Commission in 2021 as well as periodic updates regarding the progress of the program. The program will include a reporting element to demonstrate compliance and continual improvement. The steering committee will develop the criteria by which the industry participants will select a third-party contractor to collect and aggregate the company-wide reports into the segment-wide report prior to the first report due date of September 30, 2022. The third-party contractor, with involvement from the transmission segment owners or operators, may also provide VOC, NOx, and CO emissions data from the annual company-wide reports to the Division related to ozone modeling as needed and requested. Each year after the segment-wide emissions intensity target is established, the steering committee will submit a compliance certification to the Division that the transmission segment achieved the target. If such certification cannot be made, the steering committee will develop a plan for the segment to achieve compliance with the target. This plan, if needed, may include amendments to the program guidance documents, prescriptive control requirements, or other strategies to reduce methane emissions such that the transmission segment achieves the segment-wide emissions intensity target.

The inventory protocol may be based on existing EPA estimation and reporting mechanisms, specifically the EPA's Greenhouse Gas Reporting Program (GHGRP) and the Greenhouse Gas Inventory (GHGI). The emission estimation mechanisms may be updated as emission factors or calculation methods are revised. The inventory protocol will include the method(s) by which the transmission segment owners or operators will quantify and report emissions. The findings of the Economic Analysis of Methane Emission Reduction Potential from Natural Gas Systems (MAC) report (May 2016), among other data sources, may be used to develop the segment-specific methane emission reduction goals that, when combined, will achieve the transmission segment's emission intensity target in a cost-effective manner.

Annual inventory (Part D, Section V)

The Commission established an annual emissions reporting requirement to regularly update the Division's emissions inventory for equipment and activities in oil and gas operations. This inventory is intended to assist Colorado in ozone planning and the creation of emission inventories for use in ozone attainment modeling, as well as to comply with the directives in SB 19-181 to minimize emissions from the oil and gas sector. This inventory will provide missing information about oil and gas operations and will supplement the limited information provided on other aspects of those operations to assist the Commission in identifying emission sources appropriate for further emission reduction strategies.

Additionally, this inventory will also help Colorado move forward in beginning to address the broad greenhouse gas directives in SB 19-096 (Concerning the collection of greenhouse gas emissions data to facilitate the implementation of measures that would most cost-effectively allow the state to meet its greenhouse gas emissions reductions goals) and HB 19-1261 (Concerning the reduction of greenhouse gas pollution, and, in connection therewith establishing statewide greenhouse gas pollution reduction goals). This inventory is separate and apart from the APEN reporting and fee structure in Regulation Number 3, though the Commission expects that the Division, in consultation with stakeholders, will consider ways to align the reporting programs in the future to minimize duplication.

Operators will be required to submit a company-wide report on June 30 of each year for the preceding year. The first report will be due on June 30, 2021, covering emissions from July 1, 2020, through December 31, 2020. Operators are required to use the Division-approved form. The Commission expects that the Division will consult with stakeholders in the development of this form (or forms). The Commission understands that some of the emissions source category activities and equipment are not currently well defined, nor is there necessarily a well understood method of calculation for emissions (e.g., downhole well maintenance). The Commission therefore directs the Division to work with stakeholders from the adoption of this regulation throughout 2020 to, among other things: (1) appropriately define each emissions source category, activity, and equipment; and (2) identify reasonable methods of calculation for each emissions source category activity and equipment. For some emissions source category activities and equipment, achieving both goals may not be realistic before recordkeeping must begin in July 2020. Therefore, for those limited categories, the Commission expects that the Division will identify parameters that may be reported (e.g., frequency and duration) until such time as the category can be well defined and an appropriate calculation method can be identified. The Commission's intent here applies also to the well emissions reported under Section II.G.

Operators will need to include actual emissions information for various air pollutants, specifically methane, ethane, VOC, CO and NOx, for each emissions source category activity and equipment, as well as company-wide. The Commission has determined that monthly emissions information should be submitted for the summer months (May through September), while emissions for the remaining months can be aggregated into the annual figures. The Commission recognizes that, over time, these emissions inventories are likely to reflect ongoing emission reductions from the industry resulting from both the continued implementation of emission reduction strategies and the refinement of emissions estimation techniques.

The Commission also recognizes that the emission estimation techniques used for inventory purposes may differ from regulatory methods for calculating, recording, and reporting emissions under the APEN and permitting program, and intends that such differences will be considered in any enforcement matter. It is critical that these inventories be as accurate and complete as possible, and operators are expected to perform quality assurance on the data prior to submittal. However, these inventories will require the submittal of a large amount of information, so operators are provided with timeframes for correcting information found to contain substantive errors. The Commission directed the Division to report back to the Commission in 2020 regarding the inventory and progress made.

Ozone State Implementation Plan Revisions for Serious Reclassification (Part C, Section II.F. (new section in former Section X.; Part E, Sections II. and III. (formerly Sections XVI.D. and XIX.))

Due to the reclassification to Serious, Colorado must submit revisions to its SIP to address the CAA's Serious ozone nonattainment area requirements, as set forth in CAA Sections 172 and 182(c) and the final SIP Requirements Rule for the 2008 Ozone NAAQS (See 80 Fed. Reg. 12264 (March 6, 2015)). A Serious SIP revision must include provisions that require the implementation of RACT for major sources of VOC and/or NO_x (i.e., major stationary sources that emit or have the potential to emit 50 tpy or more) and for each category of VOC sources covered by a Control Technique Guideline (CTG) for which Colorado has sources in the DMNFR.

Therefore, to address the CAA Serious RACT SIP requirements, the Commission adopted revisions to Regulation Number 7 to include RACT requirements in Colorado's ozone SIP for 50 tpy major sources of VOC and/or NO_x (which became major sources as of the effective date of the reclassification to Serious). The revisions include expanding the applicability of the combustion equipment requirements, including the combustion process adjustment requirements, in Section II. to equipment located at facilities with NO_x emissions greater than or equal to 50 tons per year; incorporating by reference NSPS and/or NESHAP requirements for specific points at some 50 tpy major sources in Section III.; requiring some sources submit RACT analyses to the Division in Section III.; and a new categorical rule regarding general solvent use in Part C, Section II.F.

Consistent with Senate Bill 19-181, House Bill 19-1261 and Senate Bill 19-096, the Commission directs the Division to propose regulatory recommendations to the Commission in 2020 regarding: pneumatic devices that do not vent gas; continuous emission monitoring; alternatives to combustion for emissions control; enhanced LDAR, especially near occupied dwellings; and other options to "minimize emissions of methane and other hydrocarbons, volatile organic compounds, and oxides of nitrogen from oil and natural gas exploration and production facilities and natural gas facilities in the processing, gathering and boosting, storage, and transmissions segments of the natural gas supply chain," Colo. Rev. Stat. § 25-7-109(10)(a), including "pre-production activities, drilling, and completion," *id.* § 25-7-109(10)(c).

To increase transparency and accountability, the Commission further directs that in 2020 the Division explore options for developing a publicly accessible and searchable oil and gas complaint filing and tracking tool, and to accept public input on the development of this tool. The Division will report back to the Commission on its progress in 2020.

SIP Streamlining (Part B, Sections IV. and VII. (formerly Sections VI. and XV.) & Appendices B, C, and E)

As a SIP clean-up effort, the Commission adopted revisions to Regulation Number 7, Part B, Sections IV. and VII. and removed Appendix E so the requirements align with current EPA methods and requirements.

In 1980, the Commission adopted requirements in Regulation Number 7, Section IV. requiring an annual pressure test for gasoline transport trucks. Those requirements were based on EPA's Control Techniques Guidelines (CTG) Control of Volatile Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection Systems (December 1978) and included the test procedures for annual pressure and vacuum testing of gasoline transport trucks, as outlined in Appendix E.

In 1980, the Commission also adopted Appendix B which specifies the criteria for controlling vapors from gasoline transfer to storage tanks. Those requirements are based on EPA's CTG Design Criteria for Stage I Vapor Control Systems Gasoline Service Stations (November 1975). EPA approved these provisions into Colorado's SIP in 1995.

Since the publication of EPA's CTGs, EPA has published similar requirements for gasoline transport trucks in EPA's NSPS Subpart XX Standards of Performance for Bulk Gasoline Terminals (40 CFR Part 60, Subpart XX (August 18, 1983, last revised December 19, 2003)); NESHAP R National Emission Standards for Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations) (40 CFR Part 63 Subpart R (December 14, 1994, last revised April 6, 2006)); NESHAP Subpart BBBBBB National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities (40 CFR Part 63, Subpart BBBBBB (January 10, 2008, last revised January 24, 2011)); and NESHAP Subpart CCCCCC National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities (40 CFR Part 63, Subpart CCCCCC (January 10, 2008, last revised January 24, 2011)). These federal standards reference EPA's Method 27, Determination of Vapor Tightness of Gasoline Delivery Tank Using Pressure Vacuum Test, in contrast to the CTG's pressure-vacuum test.

The Commission adopted provisions to replace the outdated vacuum-pressure test in Regulation Number 7 with the more current EPA Method 27. The Commission also updated the test values in Regulation Number 7, which are based on EPA's CTG but also correspond to the EPA Method 27 test values in EPA's NSPS XX, NESHAP R, NESHAP BBBBBB, and NESHAP CCCCCC. The Commission also revised the recordkeeping and certification requirements in Section IV. to correspond to EPA's Method 27 and federal standards. Lastly, the Commission clarified the requirements for owners or operators using vapor collection systems that such systems must be leak-tight and properly maintained and operated.

These revisions will update Colorado's SIP and align the gasoline transport truck, terminal, and service station control and testing requirements with current EPA NSPS and NESHAP standards.

Miscellaneous

The Commission has also adopted revisions to provisions not discussed in detail in order to facilitate and align the substantive revisions identified, including revisions to the Applicability in Part A, Section I.A., and exemptions in Part A, Section II.B.

Further, these revisions will correct any typographical, grammatical, and formatting errors found within the regulation.

Incorporation by Reference

§ 24-4-103(12.5) of the State Administrative Procedure Act allows the Commission to incorporate by reference federal regulations. The criteria of § 24-4-103(12.5) are met by including specific information and making the regulations available because repeating the full text of each of the federal regulations incorporated would be unduly cumbersome and inexpedient. To fully comply with these criteria, the Commission included reference dates to rules and reference methods incorporated in Regulation Number 7, Part E, Section II.

Additional Considerations

Colorado must revise Colorado's ozone SIP to address the ozone serious nonattainment area requirements. The Clean Air Act does not expressly address all of the provisions adopted by the Commission. Rather, federal law establishes the ozone NAAQS and requires Colorado to develop a SIP adequate to attain the NAAQS. Therefore, the Commission adopted certain revisions to Regulation Number 7 to satisfy Colorado's serious nonattainment area obligations.

The Commission also adopted revisions to Regulation Number 7 that are unrelated to the reclassification to serious to update and streamline requirements for gasoline transport trucks, terminals, and service stations to align with current federal requirements; therefore, these revisions do not exceed or differ from the federal act or rules thereunder. Further, the Commission adopted revisions to Regulation Number 7 to achieve further emission reductions in the oil and gas sector.

In accordance with §§ 25-7-105.1 and 25-7-133(3), CRS, the Commission states the rules in Part D, Sections II. (except II.C.1.b.(ii) and II.F.), III.F., IV., and V. of Regulation Number 7 adopted in this rulemaking are state-only requirements and are not intended as additions or revisions to Colorado's SIP at this time.

These revisions do not exceed or differ from the federal act due to state flexibility in determining what control strategies to implement to reduce emissions. However, where the proposal may differ from federal rules under the federal act, in accordance with § 25-7-110.5(5)(b), C.R.S., the Commission determines:

- (I) The revisions to Regulation Number 7 address equipment and operations in the oil and gas sector including storage tanks, storage tank loadout, fugitive emissions from components, pneumatic controllers, and downstream transmission operations. The proposed revisions also include an annual oil and gas sector emissions inventory report. NSPS OOOO, NSPS OOOOa, NSPS Kb, NSPS KKK, NESHAP HH, NESHAP HHH, the Greenhouse Gas Reporting Program (GHGRP), and Pipeline and Hazardous Materials Safety Administration (PHMSA) may also apply to such oil and gas facilities and operations. The revisions to Regulation Number 7 apply on a broader basis to more storage tanks and fugitive emissions components than the NSPS and NESHAP and more facilities and operations than the GHGRP and PHMSA.

The Commission revised Regulation Number 7 to include regulatory RACT requirements for Colorado's major sources of VOC and/or NOx (> 50 tpy) in the SIP. Specifically, the Commission revised Regulation Number 7, Part E, Sections II. and III. to include categorical RACT requirements for combustion equipment at major sources of NOx and incorporate by reference federal standards for specific sources or points. MACT DDDDD, MACT JJJJJ, MACT ZZZZ, MACT YYYYY, NSPS GG, NSPS KKKK, NSPS IIII, and NSPS JJJJ may apply to such combustion equipment. However, the Regulation Number 7 revisions apply on a broader basis to more combustion equipment. The Commission also revised Regulation Number 7 to include categorical RACT requirements for general solvent use and is not aware of federal rules applicable to general solvent use.

- (II) The federal rules discussed in (I) are primarily technology-based in that they largely prescribe the use of specific technologies or work practices to comply. EPA has provided some flexibility in NSPS OOOO and NSPS OOOOa by allowing a storage vessel to avoid being subject to NSPS OOOO if the storage vessel is subject to any state, federal, or local requirement that brings the storage vessel's emissions below the NSPS OOOO threshold. EPA has also provided some flexibility in NSPS OOOOa by allowing a company to apply to EPA for an alternative means of emission limitations for fugitive emissions components.
- (III) The CAA establishes the 8-hour ozone NAAQS and requires Colorado to develop SIP revisions that will ensure attainment of the NAAQS. The ozone NAAQS was not determined taking into account concerns unique to Colorado. Similarly, EPA develops NSPS or NESHAP considering national information and data, not Colorado specific issues or concerns. In addition, Colorado cannot rely exclusively on a federally enforceable permit or federally enforceable NSPS or NESHAP to satisfy Colorado's nonattainment area RACT obligations. Instead, Colorado can adopt applicable provisions into its SIP directly, as the Commission has done here.

- (IV) In addition to the 2008 ozone NAAQS, Colorado must also comply with the lower 2015 ozone NAAQS. These current revisions may improve the ability of the regulated community to comply with new requirements needed to attain the lower NAAQS insofar as RACT analyses and efforts conducted to support the revisions adopted by the Commission may prevent or reduce the need to conduct additional RACT analyses for the more stringent NAAQS. The current revisions also attempt to maintain the air quality in areas of Colorado currently attaining the NAAQS; should an area slide into nonattainment, a nonattainment area designation would likely result in the imposition of costlier retrofits.
- (V) EPA has established a Serious SIP-RACT implementation deadline of July 20, 2021, for strategies not needed for any attainment demonstration. There is no timing issue that might justify changing the time frame for implementation of federal requirements.
- (VI) The revisions to Regulation Number 7 Part D, Sections I. through IV. strengthen Colorado's SIP state-only provisions. These sections currently address emissions from the oil and gas sector in a cost-effective manner, allowing for continued growth of Colorado's oil and gas industry. The revisions to Regulation Number 7, Part C, Sections II.F. recognize practices currently utilized by solvent operations. The revisions to Regulation Number 7, Part E, Sections II. and III. are also specific to existing emission points at major sources of VOC and NOx, allowing for continued growth at Colorado's major sources.
- (VII) The revisions to Regulation Number 7 Part D, Sections I. through V. establish reasonable equity for oil and gas owners and operators subject to these rules by providing the same standards for similarly situated and sized sources. The revisions to Regulation Number 7, Part C, Sections II. and Part E, Section II. similarly establish the categorical RACT requirements for similarly situated and sized sources.
- (VIII) If EPA does not approve Colorado's SIP, or if Colorado continues to fail to achieve the NAAQS, EPA may promulgate a Federal Implementation Plan; thus potentially determining RACT for Colorado's sources. This outcome may subject others to increased costs.
- (IX) Where necessary, the revisions to Regulation Number 7 include minimal monitoring, recordkeeping, and reporting requirements that correlate, where possible, to similar federal or state requirements. The revisions to Regulation Number 7 establishing an annual oil and gas inventory report are different than EPA's GHGRP in that more sources will be required to report under Regulation Number 7. This is necessary for Colorado to better understand the oil and gas emission sources and the opportunities to pursue additional emission reductions. Newly enacted legislation in Colorado has also established a compelling reason to adopt the monitoring, recordkeeping, and reporting requirements in the revisions.
- (X) Demonstrated technology is available to comply with the revisions to Regulation Number 7. Some of the revisions expand upon requirements already applicable, such as the requirements for storage tanks and component leaks. Other revisions reflect changes in industry practice, such as for solvent use. Similarly, the revisions concerning major sources of VOC and NOx generally reflect current emission controls and work practices.
- (XI) The revisions adopted will reduce significant amounts of VOC and methane, addressing both Colorado's ozone problems and making strides to reduce the impact of climate change. As set forth in the Economic Impact Analysis, the revisions to Regulation Number 7 will reduce emissions in a cost-effective manner.

- (XII) Alternative rules could also provide reductions in ozone, VOC, NO_x, methane, and other hydrocarbons to address SB 19-181 and help to attain the NAAQS. SB 19-181 specifically directs the Commission to “consider” revising its rules to adopt more stringent requirements related to LDAR, pneumatic devices, monitoring, and the transmission segment. The Commission determined that the Division’s proposal was reasonable and cost-effective. However, a no action alternative would very likely result in an unapprovable SIP.

As part of adopting the revisions to Regulation Number 7, the Commission has taken into consideration each of the factors set forth in CRS § 25-7-109(1)(b).

Colorado must revise Colorado’s ozone SIP to address the serious nonattainment area requirements. However, to the extent that CRS § 25-7-110.8 requirements apply to this rulemaking, and after considering all the information in the record, the Commission hereby makes the determination that:

- (I) These rules are based upon reasonably available, validated, reviewed, and sound scientific methodologies, and the Commission has considered all information submitted by interested parties.
- (II) Evidence in the record supports the finding that the rules shall result in a demonstrable reduction of methane, VOCs, and other hydrocarbons.
- (III) Evidence in the record supports the finding that the rules shall bring about reductions in risks to human health and the environment that justify the costs to implement and comply with the rules.
- (IV) The rules are the most cost-effective to achieve the necessary and desired results, provide the regulated community flexibility, and achieve the necessary reduction in air pollution.
- (V) The rule will maximize the air quality benefits of regulation in the most cost-effective manner.

Hundreds of people from across the state submitted written comments on the proposed changes to Regulations 3 and 7. Most of these written comments called for additional regulation of oil and gas operations, to fulfill the directives of SB 19-181, protect public health, and reduce greenhouse gas emissions. Prior to the rulemaking hearing, the Commission held public comment sessions in Rifle, Durango, and Loveland, on December 10, 11 and 16, respectively. Dozens of members of the public spoke at each of these sessions. Many commenters expressed support for the proposed changes to Regulations 3 and 7, citing concerns about risks to health and to the climate from oil and gas emissions. Many commenters at the Rifle and Durango meetings emphasized the need for rules to be applied statewide. Commenters also called on the Commission to develop requirements for continuous monitoring of oil and gas emissions. Some speakers at each comment session expressed concern that the industry was being overregulated, with some on the Western Slope emphasizing that their part of the state was in attainment with ozone standards and expressing concerns with the impact more stringent rules might have on the industry.

T. September 23, 2020 (Part D, Sections II., IV., V., VI. and Part E, Section I.)

This Statement of Basis, Specific Statutory Authority, and Purpose complies with the requirements of the Colorado Administrative Procedures Act § 24-4-103(4), the Colorado Air Pollution Prevention and Control Act, Colorado Revised Statutes (CRS) §§ 25-7-110 and 25-7-110.5., and the Air Quality Control Commission’s (Commission) Procedural Rules.

Basis

The Commission revised Part E, Section I. to reduce emissions from natural gas fired reciprocating internal combustion engines (RICE) greater than or equal to 1,000 horsepower (hp) on a state-wide basis. The revisions are in response to four distinct directives to secure reductions: Senate Bill 19-181 (SB 19-181); the second implementation period of the Regional Haze Rule pursuant to Clean Air Act Section 169A; progress towards the 2008 ozone National Ambient Air Quality Standard (NAAQS) of 75 ppb and 2015 ozone NAAQS of 70 pp; and to address nitrogen deposition at Rocky Mountain National Park (RMNP).

The Commission also revised Part D, Sections II.G., IV., and V. to include annual reporting of carbon dioxide (CO₂) and nitrous oxide (N₂O) and Section V. to include additional emissions reporting from class II disposal well facilities. The Commission adopted a new Part D, Section VI. requiring owners and operators of pre-production oil and gas operations to monitor pollution during pre-production (i.e., drilling through flowback) and early-production and to control emissions from pre-production tanks and vessels (i.e., flowback vessels). Lastly, the Commission expanded the requirements in Part D, Section II. to control emissions from hydrocarbon liquids loadout at class II disposal well facilities. These proposed revisions are a next step in addressing the directives of SB 19-181, SB 19-096, and HB 19-1261, building upon revisions adopted by the Commission in December 2019.

Statutory Authority

The Colorado Air Pollution Prevention and Control Act, §§ 25-7-101, CRS, et seq. (Act), specifically § 25-7-109(10) directs the Commission to adopt emission control regulations to minimize emissions of methane, other hydrocarbons, VOC, and NO_x from oil and gas operations. §§ 25-7-109(1)(a), (2), and (3) authorize the Commission to promulgate regulations requiring effective and practical air pollution controls for significant sources and categories of sources; emission control regulations pertaining to NO_x, hydrocarbons, and hazardous air pollutants; and emissions control regulations pertaining to the storage and transfer of petroleum products and other VOCs. § 25-7-109(2)(c), in particular, provides broad authority to regulate hydrocarbons. § 25-7-106 provides the Commission maximum flexibility in developing an effective air quality program and promulgating such combination of regulations as may be necessary or desirable to carry out that program. § 25-7-106 also authorizes the Commission to promulgate emission control regulations applicable to the entire state, specified areas or zones, or a specified class of pollution. § 25-7-106(6) further authorizes the Commission to require owners and operators of any air pollution source to monitor, record, and report information. § 25-7-105(1) directs the Commission to promulgate such rules and regulations as are consistent with the legislative declaration set forth in § 25-7-102 and that are necessary for the proper implementation and administration of Article 7. The Act broadly defines air pollutant to include essentially any gas emitted into the atmosphere (and, as such, includes VOC, NO_x, methane, and other hydrocarbons) and provides the Commission broad authority to regulate air pollutants.

Purpose

To address SB 19-181, SB 19-096, HB 19-1261, ozone, visibility, and nitrogen deposition, the Commission adopted revisions to Regulation Number 7 that limit emissions from engines, limit emissions from pre-production tanks, reduce emissions from hydrocarbon liquids loadout at class II disposal well facilities, require reporting of emissions from class II disposal well facilities, expand annual reporting to include additional greenhouse gases, and require monitoring at pre-production and early production oil and gas operations. These revisions are all adopted on a state-wide and state-only basis.

Engines (Part E)

The Commission adopted requirements in Part E, Section I. to minimize emissions from natural gas fired RICE. The requirements apply to natural gas fired RICE greater than or equal to 1,000 HP. The requirements are responsive to SB 19-181 as it applies to engines used in the oil and gas sector, as well as securing NOx reductions that will also reduce ozone, visibility, and nitrogen deposition at RMNP.

Except for the combustion process adjustment requirements for engines at major sources, the Commission has not revised the requirements pertaining to engines since 2010, and emissions from engines associated with oil and gas production in Colorado have continued to increase. While the Commission recognizes the twin challenges currently faced by the oil and gas industry in Colorado - the COVID-19 pandemic and low oil prices - this regulation's provisions for phasing in compliance over time and, particularly, the unique characteristics of the Alternative Company-Wide Compliance Plan (Company-Wide Plan, affords the industry the flexibility necessary to achieve emission reductions necessary to protect public health and the environment in a cost effective manner.

Applicability (Section I.D.5.a.)

The Commission adopted a new subpart, Section I.D.5., to establish state-only standards to reduce emissions from a subset of existing stationary engines operating over or equal to 1,000 HP and those placed in service, modified, or relocated after November 14, 2020. As defined in the rule, "placed in service" addresses when an engine is brought to a site for utilization. "Placed in service" is a new term that deviates from the Division and industry's traditional reliance on the defined term "commence construction" or NSPS JJJJ's reliance upon manufacture date.

The Commission is clarifying when replacement of an engine under an authorized alternative operating scenario (AOS) would not trigger the engine to be subject to the standards in Table 2 for engines "placed in service" after November 14, 2020. Subsequent replacements under an authorized AOS also would not trigger the replacement engine to be subject to the standards in Table 2 for engines "placed in service" after November 14, 2020. If an engine is replaced under an AOS, while it may not trigger the lower standards based on "placed in service," it may nonetheless trigger the lower standards if it is "relocated" – i.e. if the replacement engine is brought into Colorado from outside Colorado, or brought into the nonattainment area from outside the nonattainment area. The return of an engine to the same site from which it was removed for the sole purpose of repair or maintenance is not considered "placed in service" or "relocated" for purposes of this Section I.D.5.

The Commission also adopted a different framework for "relocated" engines in Regulation Number 7, Part E, then in Regulation Number 6, Part B, which provides that engines brought to a site from another location in Colorado are not considered "new" and are not subject to the more stringent standards of the applicable NSPS. Under Regulation Number 7, there are only two exceptions to when an engine is considered new: when an engine is replaced under an alternative operating scenario (AOS) in an existing permit, which requires the engine to meet the same standards as the engine replaced, or when an engine subject to a Company-Wide Plan is moved from one site to another site with the same owner or operator. When an engine is subject to a Company-Wide Plan, the operator will have more flexibility to move an engine as long as it achieves at least the same emission reductions under the plan. However, an engine brought into the 8-Hour Ozone Control Area is considered "relocated" and must meet or exceed the standards as of the date it begins operation, whether or not it is subject to a Company-Wide Plan.

Emission Standards (Section I.D.5.b.)

The Commission adopted different emission standards based on engine configuration and the date that the engine was placed in service, modified, or relocated. The Commission intends that the applicable engine configuration is determined by the most current Division-issued permit or APEN filed prior to November 14, 2020. If the engine configuration is not identified in a Division-issued permit or APEN, the owner or operator is required to submit an APEN with this information to the Division by May 1, 2021. After November 14, 2020, any change to the identified configuration that results in an emissions increase is considered a modification.

The Commission adopted, generally, more stringent NO_x standards applicable to engines placed in service, modified, or relocated after November 14, 2020. However, for 2-stroke lean burn engines, the NO_x standard is the same whether the engine is currently in use at a site or brought on at a later date. The Commission also intends that any engines subject to a more stringent standard under a permit or other rule, such as Section I.D.2.b. of Regulation Number 7, must still comply with that more stringent limit. The Commission adopted varying timing requirements for owners or operators to meet the emission standards, based on the location of subject engines inside and outside of the 8-Hour Ozone Control Area. Owners or operators with any engines in the 8-Hour Ozone Control Area are subject to a more aggressive timeline, which requires 100% of engines inside the 8-Hour Ozone Control Area to meet the emission standards by May 1, 2024, and 100% of engines outside the 8-Hour Ozone Control Area meet the emission standards by May 1, 2026. Operators with no engines inside the 8-Hour Ozone Control Area must follow the second timeline and meet the standards of at least 20% of engines each year from 2022 to 2026.

The Commission intends that the emission standards in Table 2 are a gram per horsepower-hour limit based on appropriate averaging times. The Commission also intends that operators demonstrate compliance with the certification and recordkeeping requirements through the performance testing results required by Section I.D.5.d and the portable analyzer results obtained in accordance with Section I.D.5.e., using the appropriate averaging times.

The Commission requests that the Division consider evaluating strategies to increase the electrification of engines, lower emissions standards for engines, and possible controls applicable to smaller engines.

Notification to Division (Section I.D.5.b.(iii))

If an owner or operator has subject engines, the owner or operator must submit a notice to the Division no later than May 1, 2021. However, the owner or operator of engines covered by a Company-Wide Plan will not need to submit the information required by Section I.D.5.b.(iii) for all engines.

Permit Modification (Section I.D.5.b.(iv))

The Commission adopted two deadlines for when a permit modification application is required. If the engine can meet the standards through only a permit modification, the application is due May 1, 2021. If the engine cannot meet the standards through only a permit modification, the application is due 365 days prior to that engine's compliance deadline. An example of the first scenario is where an engine currently permitted with a high emission rate can meet the standards if operated at a lower emission rate and it is, in fact, already operating as of November 14, 2020, at that lower emission rate. In contrast, an example of the second scenario is where an engine is permitted at an emission rate above the applicable standard and operates at its permitted level, which would require the operator to change the operation of the engine in order to comply. This engine, therefore, would have a compliance date in accordance with Section I.D.5.b.(v)(B), and the permit application would be due 365 days prior to that engine's compliance deadline. Stakeholders expressed concerns that the Division may not be able to timely process all of the permit modifications.

Therefore, the Commission determined that the flexibility outlined in the rule was necessary for both industry and the Division. In the case of a pending permit modification, the Commission intends that the most current APEN requested limits will be used to determine compliance with the rule.

Industry stakeholders have expressed that the rules need to be more accommodating for Division delays in permit issuance for those situations where owners and operators cannot take action to comply with the emission standards without a permit in hand. Industry notes that without a revised permit, owners and operators would be out of compliance with federal and state permit requirements, leaving the operator with the choice of what standards to comply with. Based on information provided by these stakeholders, the Division believes that there are only 15 such permits. Additionally, the vast majority of engine upgrades do not necessitate a permit modification prior to completing the upgrade.

The Division has indicated that it has enough dedicated staff to complete the required permit modifications in a timely fashion so long as the operator submits the permit application at least one year in advance of the compliance deadline. To address stakeholder concerns, the Commission expects the Division to work with operators that require a permit prior to commencing upgrades and create a process to give these permit applications priority. Should any permits push up against the one-year issuance deadline, the Division, in its discretion, will evaluate any potential operator compliance deadline extensions on a case-by-case basis.

Alternative Company-Wide Compliance Plan (Company-Wide Plan) (Section I.D.5.c)

The Commission adopted a Company-Wide Plan option to allow flexibility for each owner or operator to develop a technologically and economically feasible timeline tailored to its individual operations to achieve the same or better emission reductions than would be achieved through compliance with the emission standards on an individual engine basis. The Company-Wide Plan requires an overall emissions percentage reduction based on company-wide engine operations. Owners or operators using this option must demonstrate that the total NO_x emissions allowed under the Company-Wide Plan are less than or equal to the total NO_x emissions allowed through compliance with the emission standards on an individual engine basis. Engines included in a Company-Wide Plan remain subject to the performance testing, monitoring, recordkeeping, and reporting requirements.

This Company-Wide Plan option is available only to owners or operators with five or more engines that are subject to Section I.D.5.b(v)(B). For purpose of the Company-Wide Plan only, the term owner/operator refers to owners or operators that are participating in a Company-Wide Plan and are owned or operated by the same parent company. Engines that already meet the emission standards of Table 2 but only need a permit modification to reflect compliance may not be part of a Company Wide Plan for which credit is claimed by the operator. However, if the operator makes a further retrofit to the engine, the operator may include that engine in the Company Wide Plan and claim credit for the reductions achieved by the further retrofit. For example, if Engine A, a 4-stroke lean burn engine, has a permit limit of 1.8 g/hp-hr, but currently operates at 1.2 g/hp-hr, Engine A would not be included in the Company Wide Plan. However, if the operator installs additional control technology such that Engine A can now operate at 1.0 g/hp-hr, the emission reductions associated with the drop in emissions from 1.2 g/hp-hr to 1.0 g/hp-hr can be included in the Company-Wide Plan. Only physical retrofits, and not operational changes, can be accounted for in this manner.

Owners or operators will submit a notification (referred to as a compliance plan) using a Division-approved form that will be developed with stakeholder input. Recognizing that the Company-Wide Plan is intended to afford flexibility only where it will achieve the same or better reductions, the Commission has provided for detailed information to be submitted to the Division for review. The information submitted will allow the Division to compare the emission standards and operating conditions that an engine is meeting before and after the Company-Wide plan as well as the maximum emissions permissible if all Company-Wide Plan engines complied individually with the standards versus the permissible emissions under the Company-Wide Plan.

Owners or operators must calculate “Plan Emission Reductions” - i.e. a summation of NO_x emission reductions from all engines in the Company-Wide Plan. This figure is calculated by looking at the maximum amount of NO_x emissions from the engines before November 14, 2020 (using the current permitted emission rate) and subtracting the maximum amount of NO_x emissions that will be allowed from those engines under the Company-Wide Plan.

Owners or operators must also demonstrate that the Company-Wide Plan will result in real emission reductions, and the Division is directed to disapprove any Company-Wide Plan that the Division determines does not achieve those reductions. Owners or operators will calculate the estimated historic emissions from the plan’s engines in tons per year as a baseline, using the most stringent regulatory or permitted emission standards and operating conditions in conjunction with actual operating hours (averaged over 2017-2019). That baseline figure is then compared to the maximum amount of emissions permissible from the Company-Wide Plan engines to ensure that the Company-Wide Plan will result in emission reductions. The demonstration also includes a comparison of the emission reductions that would be achieved from the actual baseline figure if each engine complied with the emission standards on an individual basis to the reductions that will be achieved under the Company-Wide Plan. In this way, the Commission seeks to ensure that a Company-Wide Plan achieves demonstrable reductions in NO_x emissions.

Owners or operators will not be allowed to utilize reductions in permitted operating hours to offset emission reductions that would otherwise be achieved where permitted hours are higher than actual hours of operation (on average over 2017, 2018, and 2019). For example, an operator with a permit to operate at 8,760 hours per year but that operated only at 5,000 hours per year (on average over 2017, 2018, and 2019) cannot modify its permit to lower the permitted hours of operation to 5,000 and thereby create NO_x emissions for which it can take credit in its Company-Wide Plan.

Some stakeholders have expressed concerns over how engines that began operation during or after the averaging years will calculate “historic” emissions. For these types of engines, the Commission expects that the most recent year(s) of operation should be used to calculate “historic” emissions. If there is less than one year of operation during this time frame, the Commission expects that the operator should extrapolate the available operation emission data to one year to estimate “historic” emissions.

Owners or operators must also submit notice of relocated engines in the annual update to the Company-Wide Plan, beginning in 2022. A relocated engine will be categorized by its new location (inside or outside of the 8-Hour Ozone Control Area) for purposes of the engine’s compliance deadline.

To assist with implementation, the Commission directs the Division to provide timely guidance to the regulated community as to how to develop a Company-Wide Plan. The Commission recognizes that the Company-Wide Plan provisions are complicated, and believes providing the following examples of how the Commission intends the program to work will be helpful.

Example 1:

An engine in a Company-Wide Plan is located inside the 8-Hour Ozone Control Area. It is moved from site A to site B (same owner/operator), also within the 8-Hour Ozone Control Area. The engine was not “placed in service” or “relocated” within the meaning of this rule, and compliance deadlines would not change. The owner/operator just submits the new location in its annual update.

Example 2:

An engine in a Company-Wide Plan is located outside the 8-Hour Ozone Control Area. It is moved from site A to site B (same owner/operator), except that site B is located inside the 8-Hour Ozone Control Area. The engine is not “placed in service” within the meaning of this rule but it is “relocated.” The engine’s relocation into the 8-Hour Ozone Control impacts both the standard with which it must comply and the timing of when the new standard must be achieved.

If the engine was not proposed for retrofit or if it was proposed for retrofit but under the Company-Wide Plan it would not meet the standard, the engine will need to meet the emission standards as of its date of operation following relocation. If the engine was proposed for retrofit to achieve performance below the emission standards (retrofit/shut-down, etc.), the engine must meet the more stringent of either the applicable standard or the proposed Company-Wide Plan standard as of the date of operation following the relocation date. Conversely, if an engine subject to a Company-Wide Plan located in the 8-Hour Ozone Control Area is moved to a different site (same owner/operator) outside of the 8-Hour Ozone Control Area, the engine is not “placed in service” or “relocated” within the meaning of this rule. The engine must meet the standard specified in the Company-Wide Plan consistent with the applicable compliance date.

Example 3:

Operator A has 20 engines and submits a Company-Wide Plan that includes modifying five engines (in 2022 and 2023) and shutting down two engines (in 2024). Operator A then transfers ownership of one of the engines (either the engine or the entire facility) to be shut down to Operator B; that shutdown would have achieved 20 tons per year (tpy) NO_x reduction. Operator A must find an additional 20 tpy NO_x reduction from the 19 engines remaining in its Company-Wide Plan.

Example 4:

A Company-Wide Plan includes shutting down an engine. The operator then realizes it needs a replacement engine at that same site. The operator has a few options. First, the operator can amend its Company-Wide Plan to no longer shut down the engine (assuming the engine’s compliance deadline has not yet passed) and can identify other actions to be taken to achieve the emission reductions that would have otherwise been realized from the shutdown of the engine. Second, the operator can shut down the engine as originally intended and bring on a new engine. The new engine will be subject to the emission standards as an engine “placed in service” after November 14, 2020, and cannot be a part of the operator’s Company-Wide Plan because an engine scheduled for shut down under a Company-Wide Plan cannot be replaced with a different engine subject to the Company-Wide Plan. Because the operator must comply with the Company-Wide Plan, the operator will still need to cancel the APEN and permit for the existing engine and permit the new engine as a new source.

Example 5:

An operator has ten engines subject to a Company-Wide Plan and intends to modify five of those engines to achieve the required Plan Emission Reductions. However, in order to meet the CO standards for one of the engines that will not be modified to achieve Plan Emission Reductions, the operator must make an adjustment that has the effect of increasing NO_x emissions from that engine. In calculating the maximum allowable NO_x emissions from engines in the compliance plan and Plan Emission Reductions required, the operator must account for the increase in NO_x emissions from the engine.

Performance Testing, Monitoring, Recordkeeping, and Reporting (Sections I.D.5.d., I.D.5.e., I.D.5.f., and I.D.5.g.)

The Commission adopted performance testing requirements to establish a baseline for evaluating an engine’s performance – i.e. to enable an operator to know whether the engine was meeting the standards already or how much action might be required to meet the standards. To conserve the resources of both the Division and the operators, the Commission has allowed for operators to rely on existing ongoing semi-annual portable analyzer testing requirements, as well as performance testing conducted under NSPS JJJJ, a permit, or testing conducted voluntarily after January 1, 2020. The Commission also adopted semi-annual portable analyzer testing requirements. The portable analyzer monitoring must commence within twelve (12) months of the initial performance test. The Commission intends that operators will conduct two portable analyzer tests in 2022, the first of which must be completed by June 30, 2022.

The Commission has also adopted new monitoring, recordkeeping and reporting requirements. With respect to oil and filter changes under Section I.D.5.e.(iv)(A), the Commission acknowledges that the development of an oil analysis program that tests to ensure that oil does not need to be changed meets the requirements of that section.

In the recordkeeping section, the Commission requires that for both performance tests and portable analyzer tests, the owner or operator retains records regarding the date, engine settings on the date of the test, and documentation of the methods and results of the testing/monitoring. The Commission acknowledges that maintaining the test reports (for performance tests) and maintaining records consistent with the Division's Portable Analyzer Monitoring Protocol (for portable analyzer test), is sufficient to demonstrate compliance with the requirements to maintain the date, engine setting on the date of the test, and documentation of the methods and results of the testing/monitoring. The Commission has required the reporting of the results of performance tests (Section I.D.5.g.(i)) and semi-annual portable tests (Section I.D.5.g.(iv)). By "results," the Commission means that the owner/operator shall indicate whether the tests were passed or failed. Other, more detailed results are required to be maintained as part of the recordkeeping requirements and will be available to the Division upon request.

General provisions (Section I.D.2.)

In 2019, the Commission adopted a reorganization of Regulation Number 7 moving like-sections together, including engines. The Commission now completes the reorganization of the engine sections by duplicating the applicable general provisions that applied to engines in Part D, Section II. (formerly numbered Section XVII.) in Part E, Section I.D.2. These provisions will continue to apply to engines addressed in Part E, Sections I.D.3. and I.D.4. (formerly Sections XVII.E.) and will also apply to engines addressed under the new Part E, Section I.D.5.

Oil and gas operations (Part D)

The Commission expanded or adopted additional requirements in Part D to further minimize emissions of greenhouse gases, ozone precursors, and other hydrocarbons from the oil and gas sector.

Pre-production and early production monitoring

The Commission adopted a new Section IV. that requires owners or operators to monitor air quality at and/or around pre-production operations (i.e., drilling, fracturing, drill-out, flowback) and early production operations (i.e., six months). The purpose of this air quality monitoring is multi-faceted in that the Commission anticipates the monitoring program will gather information about the evolving oil and gas monitoring technologies, data about potential emissions during pre-production and early production operations (e.g., ozone precursor emissions, greenhouse gas emissions, hazardous air pollutants), and inform future monitoring efforts. Owners or operators will also monitor air quality for ten days prior to beginning pre-production operations. The Commission recognizes that ten days does not provide a comprehensive or long-term baseline but intends that it cover day-of-week variability in surrounding activities and short-term meteorological variability, in order to provide a reference point for interpreting subsequent data.

Owners or operators must submit an air quality monitoring plan to the Division for approval prior to monitoring air quality. The Commission created a flexible air quality monitoring program that allows the operator to specify what pollutant(s) representative of pre-production and early production hydrocarbon emissions will be monitored and by what monitoring technology. The Commission anticipates that the additional elements of the air quality monitoring plan, such as monitor siting, frequency of measurements, monitoring equipment limitations, and ability to trigger or collect speciated samples, will vary based on the monitoring objectives and technology utilized.

The Commission also anticipates that the response level(s) will vary based on the monitoring technology, monitor placement, the pollutant(s) monitored, data collection and averaging times, and other factors. The response level may differ from a lower detection level established by the owner or operator that triggers an initial investigation of potential emissions at the facility. The Commission expects that the monitoring technology selected will have a detection ability sufficient to detect the pollutant(s) monitored at an appropriate level above area concentrations such that the monitoring objectives (e.g., detect ozone precursors, detect hazardous air pollutants, detect greenhouse gas emissions, associate elevated monitored values to an emission source within the monitored operations) are achieved. The Commission recognizes that not every elevated measurement constitutes a detection requiring a response but instead may be accompanied by analytics evaluating the measurements in comparison to an emission source or activity. The Commission also expects that placement of the monitors will be designed to be adequate to meet the objectives of the monitoring plan and that operators will select a monitoring technology that collects measurements at short-term intervals (e.g., 1 minute, 15 minutes, 1 hour) and appropriate sensitivity.

For example, concentrations at 2000-4000 feet away from the operations are likely to be low and, therefore, would require high-sensitivity instruments; monitors placed in close distance to the operations may need to be placed at variable heights to detect emissions from equipment of different heights; or monitors may need to be placed in both upwind and downwind locations, depending on the monitoring technology. In addition, the Commission expects the Division to work with operators in approving air quality monitoring plans to make sure that local jurisdiction air quality monitoring requirements and COGCC site preparation requirements are considered. The Commission expects the Division to consult with relevant local governments in reviewing monitoring plans, to obtain their input on local circumstances or concerns that may guide the Division's determinations on plan adequacy.

Owners or operators will also submit monthly reports of air quality monitoring to the Division. These monthly reports will include descriptions of activities that occurred during the monitoring period such that monitoring data can be understood in relation to activity onsite (e.g., accounting for engine emissions). The Commission recognizes that monitoring data often requires additional analysis to interpret the resulting data. Therefore, for this first oil and gas air quality monitoring program, the Commission expects that operators will make the raw data (e.g., monitor/sensor and meteorological readings prior to analysis or processing) available to the Division upon request (and expects the Division to make the raw data available to the relevant local government entities upon request) but submit the analyzed data results in the monthly reports. The Commission believes these reports will provide valuable information to interested citizens, particularly those who live in close proximity to oil and gas facilities. Therefore, the Commission requests that the Division make the reports publicly available in the most efficient means possible, which may include posting on the Division's website individual reports and/or a compilation summary. This flexible monitoring program is intended as an initial step to help inform future oil and gas monitoring efforts.

Recognizing that this pre-production emissions monitoring program represents a first step in understanding both pre-production emissions and the rapidly evolving technologies that may be used to monitor them, the Commission directs the Division to report back to the Commission no later than March 31, 2022 with an initial summary of activities to implement the rule since September, 2020; learnings and insights on monitoring technologies, including technologies for continuous methane monitoring; appropriate data summaries on observed emissions based on the monthly reports received; initial feedback on the adequate length of monitoring time during and possible identification of exemptions from monitoring for certain types of facilities.

Flowback vessels

The Commission also adopted in the new Section VI. a requirement for owners or operators of pre-production operations to control emissions from flowback vessels. After hydraulic fracturing, operators bring the frac fluids and entrained solids to the surface. EPA's NSPS OOOOa Section 60.5375a requires operators to route flowback during the initial flowback stage into one or more well completion vessels or storage vessels and commence operation of a separator unless it is technically infeasible for a separator to function. During the separation flowback stage, NSPS OOOOa requires operators to route all recovered liquids from the separator to one or more well completion vessels or storage vessels, re-inject the liquids into a well, or route the liquids to a collection system. NSPS OOOOa allows operators to use open vessels to contain flowback fluids and solids and does not consider a well completion vessel a storage vessel, which means operators are not required to control well completion vessel emissions. Therefore, to build on the NSPS reduced emission completion requirements and further reduce pre-production tank emissions, owners or operators of pre-production operations must use enclosed flowback vessels after the drill-out phase, which the Commission recognizes has a high ratio of solids to liquids, and route emissions from flowback vessels to air pollution control equipment.

Class II disposal well facilities

The Commission added a new definition of class II disposal well facilities. This definition is based on EPA's Underground Injection Control Program: Criteria and Standard definition of class II well (see 40 CFR Section 146.5(b)(1)). The Commission did not include the element of EPA's definition concerning enhanced recovery of oil or natural gas as storage tanks related to those activities are considered part of the associated well production facility. The Commission recognizes that some class II disposal well facility operators interpret Part D, Section II.C. such that their storage tanks have not been subject to the storage tank control requirements. Although the Commission understands that the Division intended Part D, Section II.C. to apply to storage tanks serving class II disposal well facilities, the Commission also recognizes that a good faith argument existed under the prior rule language to support the alternative interpretation. The Commission intends for the Division to work with owners or operators to address implementation concerns that may arise including related to the May 1, 2021, state-wide compliance deadline for controlling emissions from storage tanks ≥ 2 tpy and associated monitoring requirements as well as concerns related to the need for supplemental fuel to control emissions.

The Commission also expanded the hydrocarbon liquids loadout requirements in Part D, Section II.5. to hydrocarbon liquids loadout at class II disposal well facilities. Operators inject fluids, primarily brines, associated with oil and natural gas production into class II wells. Current regulatory requirements in the Safe Drinking Water Act for class II wells relate to the construction, operation, and monitoring of the well. The Safe Drinking Water Act does not require emissions reporting or storage tank or loadout emissions controls at class II disposal well facilities. Therefore, the Commission expanded the hydrocarbon liquids loadout requirements to class II disposal well facilities to reduce emissions from these operations.

The Commission directs the division to evaluate potential emission issues associated with load ins at class II disposal facilities

Annual emissions reporting

In 2019, the Commission adopted annual emissions reporting requirements for Colorado's oil and gas sector in Part D, Sections II.G., IV., and V. Owners and operators are required to report VOC, NOx, CO, ethane, and methane emissions to the Division on an annual basis. To further address and inform the GHG directives of Senate Bill 19-096 and House Bill 19-1261, the Commission expanded the reporting requirements to include the reporting of CO₂ and N₂O emissions from Colorado's oil and gas sector.

As described, the Safe Drinking Water Act does not require emissions reporting. Therefore, the Commission also clarified and expanded the annual emissions reporting requirements for class II disposal well facilities to better understand the emissions from these facilities and activities. Related to the fluids accepted for injection disposal, the Commission is requiring owners or operators to take periodic samples of the liquids to inform emission estimates. Acknowledging that fluid intake and facility designs may differ, the Commission expects the Division will work with owners and operators to develop sampling frequencies and protocols and to ensure accurate and consistent methods are used for emissions estimation and reporting. Further, these revisions will correct any typographical, grammatical, and formatting errors found within the regulation.

Incorporation by Reference

§ 24-4-103(12.5) of the State Administrative Procedure Act allows the Commission to incorporate by reference federal regulations. The criteria of § 24-4-103(12.5) are met by including specific information and making the regulations available because repeating the full text of each of the federal regulations incorporated would be unduly cumbersome and inexpedient. To fully comply with these criteria, the Commission includes reference dates to rules and reference methods incorporated in Regulation Number 7.

Community Engagement

§ 25-7-105(e) requires engagement with disproportionately impacted communities, other state agencies, stakeholders, and the public. The Division provided multiple ways for the public, local governments, industry, environmental groups, and other stakeholders to provide comment during the development of the proposed rules, including email and remote stakeholder meeting participation.

Additional Considerations

The Clean Air Act does not expressly address all of the provisions adopted by the Commission. Rather, federal law establishes the ozone NAAQS and Regional Haze Rule and requires Colorado to attain the NAAQS and reduce visibility. Therefore, the Commission adopted certain revisions to Regulation Number 7 to reduce VOC and NO_x emissions in Colorado. In accordance with §§ 25-7-105.1 and 25-7-133(3), CRS, the Commission states the rules adopted in this rulemaking are state-only requirements and are not intended as additions or revisions to Colorado's SIP at this time.

These revisions do not exceed or differ from the federal act due to state flexibility in determining what control strategies to implement to reduce emissions. However, where the proposal may differ from federal rules under the federal act, in accordance with § 25-7-110.5(5)(b), C.R.S., the Commission determines:

- (I) The revisions to Regulation Number 7 address equipment and operations in the oil and gas sector including engines, pre-production operations, and class II disposal well facilities storage tanks and storage tank loadout. The proposed revisions also revise the annual oil and gas sector emissions inventory report to include GHGs and class II disposal well facilities. NSPS JJJJ, NSPS OOOO, NSPS OOOOa, NSPS Kb, NSPS KKK, NESHAP HH, NESHAP HHH, NESHAP ZZZZ, and the Greenhouse Gas Reporting Program (GHGRP) in 40 CFR Part 98 may also apply to such oil and gas facilities and operations. The revisions to Regulation Number 7 apply on a broader basis to more storage tanks than the NSPS and NESHAP, more engines than NESHAP JJJJ, and more facilities and operations than the GHGRP.

- (II) The federal rules discussed in (I) are primarily technology-based in that they largely prescribe the use of specific technologies or work practices to comply. EPA has provided some flexibility in NSPS OOOO and NSPS OOOOa by allowing a storage vessel to avoid being subject to NSPS OOOO if the storage vessel is subject to any state, federal, or local requirement that brings the storage vessel's emissions below the NSPS OOOO threshold.
- (III) The CAA establishes the 8-hour ozone NAAQS and requires Colorado to develop SIP revisions that will ensure attainment of the NAAQS. The ozone NAAQS was not determined taking into account concerns unique to Colorado. The Regional Haze Rule was also not determined taking into account concerns unique to Colorado. Similarly, EPA develops NSPS or NESHAP considering national information and data, not Colorado specific issues or concerns.
- (IV) In addition to the 2008 ozone NAAQS, Colorado must also comply with the lower 2015 ozone NAAQS. And, Colorado must improve visibility in accordance with Regional Haze. These current revisions may improve the ability of the regulated community to comply with new requirements needed to attain the lower NAAQS insofar as efforts conducted to support the revisions adopted by the Commission may prevent or reduce the need to conduct additional analyses for the more stringent NAAQS. The current revisions also attempt to maintain the air quality in areas of Colorado currently attaining the NAAQS; should an area slide into nonattainment, a nonattainment area designation would likely result in the imposition of costlier retrofits. And, the current revisions will improve visibility across the state, in particular in Colorado's class I areas.
- (V) Colorado must attain the 2008 ozone NAAQS by July 20, 2021, and the 2015 ozone NAAQS by August 3, 2021, or risk being reclassified. Colorado must make reasonable progress toward improving visibility or risk EPA establishing a federal regional haze plan for Colorado. EPA has established a Serious SIP-RACT implementation deadline of July 20, 2021, for strategies not needed for any attainment demonstration. EPA has established a Regional Haze SIP submittal deadline of July 1, 2021. There is no timing issue that might justify changing the time frame for implementation of federal requirements.
- (VI) The revisions to Regulation Number 7 address emissions from engines and the oil and gas sector in a cost-effective manner, as detailed in the Economic Impact Analysis, allowing for continued growth of Colorado's industry.
- (VII) The revisions to Regulation Number 7 establish reasonable equity for owners and operators subject to these rules by providing the same standards for similarly situated and sized sources.
- (VIII) If Colorado continues to fail to achieve the NAAQS or make progress to reduce visibility, EPA may promulgate Federal Implementation Plans; thus potentially determining requirements for Colorado's sources. This outcome may subject others to increased costs.
- (IX) Where necessary, the revisions to Regulation Number 7 include minimal monitoring, recordkeeping, and reporting requirements that correlate, where possible, to similar federal or state requirements. The revisions to Regulation Number 7 establishing and revising annual oil and gas inventory reporting are different than EPA's GHGRP in that more sources will be required to report under Regulation Number 7. This is necessary for Colorado to better understand the oil and gas emission sources and the opportunities to pursue additional emission reductions. Newly enacted legislation in Colorado has also established a compelling reason to adopt the monitoring, recordkeeping, and reporting requirements in the revisions.
- (X) Demonstrated technology is available to comply with the revisions to Regulation Number 7. Some of the revisions expand upon requirements already applicable, such as the requirements for hydrocarbon liquid loadout. Other revisions reflect changes in industry practice, such as for controlling emissions from flowback vessels.

- (XI) The revisions adopted will reduce NO_x, VOC, and methane, addressing both Colorado's ozone problems, making strides to reduce the impact of climate change, and making progress to improve visibility. As set forth in the Economic Impact Analysis, the revisions to Regulation Number 7 will reduce emissions in a cost-effective manner.
- (XII) Alternative rules could also provide reductions in greenhouse gases, ozone, VOC, NO_x, other hydrocarbons, impacts to visibility, and nitrogen deposition to address Regional Haze, SB 19-181, and help to attain the NAAQS. SB 19-181 specifically directs the Commission to "consider" revising its rules to adopt more stringent requirements for the oil and gas sector. The Commission determined that the Division's proposal was reasonable and cost-effective. However, a no action alternative would very likely result in the need for much more stringent requirements to reduce nitrogen deposition in RMNP, improve visibility in Colorado's Class I areas, and reduce ozone across the state but particularly in the DMNFR.

As part of adopting the revisions to Regulation Number 7, the Commission has taken into consideration each of the factors set forth in CRS § 25-7-109(1)(b).

To the extent that CRS § 25-7-110.8 requirements apply to this rulemaking, and after considering all the information in the record, the Commission hereby makes the determination that:

- (I) These rules are based upon reasonably available, validated, reviewed, and sound scientific methodologies, and the Commission has considered all information submitted by interested parties.
- (II) Evidence in the record supports the finding that the rules shall result in a demonstrable reduction of methane, VOCs, and other hydrocarbons.
- (III) Evidence in the record supports the finding that the rules shall bring about reductions in risks to human health and the environment that justify the costs to implement and comply with the rules.
- (IV) The rules are the most cost-effective to achieve the necessary and desired results, provide the regulated community flexibility, and achieve the necessary reduction in air pollution.
- (V) The rule will maximize the air quality benefits of regulation in the most cost-effective manner.

U. December 18, 2020 (Part D, Section II.; Part E, Sections II., IV., and V.)

This Statement of Basis, Specific Statutory Authority, and Purpose complies with the requirements of the State Administrative Procedure Act, § 24-4-103(4), C.R.S., the Colorado Air Pollution Prevention and Control Act, §§ 25-7-101, C.R.S., et. seq., and the Air Quality Control Commission's (Commission) Procedural Rules, 5 Code Colo. Reg. §1001-1.

Basis

On December 26, 2019, the Environmental Protection Agency (EPA) reclassified the Denver Metro North Front Range (DMNFR) to Serious, after 2015-2017 ozone data failed to show attainment of the 2008 8-hour Ozone National Ambient Air Quality Standard (NAAQS). See 84 Fed. Reg. 247 (December 26, 2019). As a Serious area, the major source threshold lowers from 100 tons per year (tpy) of VOC or NO_x to 50 tpy. EPA has also designated the DMNFR as Marginal nonattainment for the 2015 ozone NAAQS of 70 ppb. Therefore, to ensure progress towards attainment of the 2008 and 2015 ozone NAAQS, the Commission is adopting revisions to Regulation Number 7 to include reasonably available control requirements (RACT) for major sources with VOC and/or NO_x emissions equal to or greater than 50 tpy; specifically, for foam manufacturing, boilers, turbines, landfill gas and biogas fired engines, and wood surface coating.

Statutory Authority

The State Air Act, specifically § 25-7-105(1), directs the Commission to promulgate such rules and regulations as are consistent with the legislative declaration set forth in § 25-7-102 and that are necessary for the proper implementation and administration of Article 7. The Act broadly defines air pollutant to include essentially any gas emitted into the atmosphere (and, as such, includes VOC, NOx, methane and other hydrocarbons) and provides the Commission broad authority to regulate air pollutants. Section 105(1)(a)(I) directs the Commission to adopt a state implementation plan (SIP) to attain the NAAQS. § 25-7-106 provides the Commission maximum flexibility in developing an effective air quality program and promulgating such combination of regulations as may be necessary or desirable to carry out that program. § 25-7-106 also authorizes the Commission to promulgate emission control regulations applicable to the entire state, specified areas or zones, or a specified class of pollution. § 25-7-106(6) further authorizes the Commission to require owners and operators of any air pollution source to monitor, record, and report information.

§§ 25-7-109(1)(a), (2), and (3) of the Act authorize the Commission to promulgate regulations requiring effective and practical air pollution controls for significant sources and categories of sources, emission control regulations pertaining to nitrogen oxides and hydrocarbons, and emissions control regulations pertaining to the storage and transfer of petroleum products and other VOCs. § 25-7-109(2)(c), in particular, provides broad authority to regulate hydrocarbons. § 25-7-109(10) directs the Commission to adopt emission control regulations to minimize emissions of methane, other hydrocarbons, VOC, and NOx from oil and gas operations.

Purpose

The following section sets forth the Commission's purpose in adopting the revisions to Regulation Number 7, and includes technological and scientific rationale for the adoption of the revisions.

The Commission is revising Regulation Number 7 to include provisions in the SIP that require the implementation of RACT for major sources (≥ 50 tpy NOx and/or VOC) including expanding existing requirements, incorporating federal requirements, and including categorical RACT requirements.

The Commission is also clarifying requirements related to leak detection and repair (LDAR) inspections. The revisions also correct typographical, grammatical, and formatting errors found through the regulation.

Major source RACT

Due to the reclassification to Serious, Colorado must submit revisions to its SIP to address the Clean Air Act's (CAA) Serious ozone nonattainment area requirements, as set forth in CAA §§ 172 and 182(c) and the final SIP Requirements Rule for the 2008 Ozone NAAQS (See 80 Fed. Reg. 12264 (March 6, 2015)). A Serious SIP revision must include provisions that require the implementation of RACT for major sources of VOC and/or NOx (i.e., sources that emit or have the potential to emit 50 tpy or more) and for each category of VOC sources covered by a Control Technique Guideline (CTG) for which Colorado has sources in the DMNFR. Therefore, the Commission adopted revisions to Regulation Number 7 to include RACT requirements in Colorado's ozone SIP for 50 tpy major sources of VOC and/or NOx including a NOx emission limit for boilers between 50 MMBtu/hr and 100 MMBtu/hr, a NOx emission limit for landfill gas or biogas fired engines, NOx emission limits for combustion turbines, categorical requirements to reduce VOC emissions related to foam manufacturing, and expanded categorical requirements to reduce VOC emissions related to wood surface coating.

Boilers

In 2019, the Commission expanded the combustion equipment requirements adopted in 2016 and 2018 for the 100 tpy major sources to the 50 tpy major sources. Specifically, for boilers, the Commission adopted provisions requiring boilers greater than or equal to 50 MMBtu/hr at 50 tpy major sources to comply with a 0.2 lb/MMBtu NOx emission limit. The Commission now further expands the categorical RACT requirements to require 50-100 MMBtu/hr boilers at 50 tpy major sources to comply with a 0.1 lb/MMBtu NOx emission limits. The owners or operators of these boilers will continue to comply with the combustion process adjustment, periodic performance testing, and recordkeeping requirements.

Engines

In 2019, the Commission expanded the NOx emission limit requirements for compression ignition reciprocating internal combustion engines (RICE) and combustion process adjustment requirements for stationary RICE. The Commission now further expands the categorical RACT requirements for engines to include landfill gas and biogas fired RICE and require the engines to comply with the NOx emission limit in EPA's NSPS JJJJ for landfill/digester gas fired engines. The owners or operators of these engines will continue to comply with the combustion process adjustment, periodic performance testing, and recordkeeping requirements.

Turbines

In 2019, the Commission adopted provisions requiring turbines constructed before February 18, 2005, to comply with NSPS GG and turbines construction after February 18, 2005, to comply with NSPS KKKK. During review of the submitted SIP RACT requirements, EPA questioned Colorado's reliance on EPA's NSPS GG as RACT and requested Colorado consider the NOx emission limits in EPA's NSPS KKKK for Colorado's NSPS GG and pre-NSPS GG turbines at major sources. While the Commission does not agree that NSPS GG is inappropriate as SIP RACT for Colorado's NSPS GG and pre-NSPS GG turbines, the Commission revised the requirements for turbines to reference NSPS KKKK NOx emission limits for the turbines constructed before February 18, 2005, but retain the testing and monitoring requirements of NSPS GG. Turbines with CEMS that are capable of operating in both combined and simple cycle modes are to show compliance with a 30-day average. Similar to EPA's discussion in the preamble to NSPS KKKK, the Commission recognizes turbines may have emission spikes during unit startup and that, therefore intends the turbine NOx emission limits to be implemented as under NSPS KKKK. See 71 Fed. Reg. 38,482 at 38,488-38,489 (July 6, 2006) "While continuous compliance is not required, excess emissions during startup, shutdown, and malfunction must be reported." All turbines will continue to comply with good air practices for minimizing emissions, combustion process adjustment, and recordkeeping requirements.

Wood coating

In 2018, the Commission adopted requirements for wood furniture surface coating based on recommendations in EPA's Control of Volatile Organic Compound Emissions from Wood Furniture Manufacturing Operations CTG (Wood Furniture CTG) (1996), including topcoat and sealer VOC content limits, work practices, and recordkeeping requirements. Wood furniture is defined to mean "any product made of wood, a wood product such as rattan or wicker, or an engineered wood product such as particleboard," which is not inclusive of all wood products such as doors. However, in EPA's A Guide to the Wood Furniture CTG and NESHAP (1997), EPA states that "States may choose to extend their rules to other operations. For example, some States have developed rules for manufacturers of wood products so they may include limitations for manufacturers of items such as musical instruments or doors." Therefore, the Commission expanded the wood furniture surface coating requirements to the surface coating of other wood products such as doors, door casings, and decorative wood accents.

Foam manufacturing

The Commission adopted new VOC control requirements for foam manufacturing operations. The new provisions affect three foam manufacturing operations, although one of the sources is modifying their permit to more accurately reflect their actual emissions and will, therefore, have VOC emissions below 50 tpy. These new provisions include emission control requirements, work practices, monitoring, and recordkeeping requirements for foam manufacturing operations.

LDAR (Part D, Section II.)

The Commission also adopted clarifying revisions to the leak detection and repair (LDAR) provisions the Commission adopted in December 2019 including clarification to applicability and requirements for recordkeeping and reporting. The clarifications to Sections II.E.4.c. and II.E.4.d. ensure that operators continue to determine applicability in accordance with the storage tank or facility emissions as they have since the LDAR program was adopted in 2014. The inclusion of recordkeeping and reporting elements specific to increased inspections based on location from occupied areas ensure that the Commission can evaluate the efficacy of the LDAR program. The Commission acknowledges that not all operators will need to conduct a precise analysis concerning their location in relation to occupied areas (i.e., proximity analysis) based on their general distance.

However, the Commission believes it is important for operators to provide at least general documentation that they considered their location, even if to describe an extreme remote location. The Commission also acknowledges that some operators may elect to comply with the increased frequency inspections for certain facilities without conducting a proximity analysis. Documentation of this decision to comply with the increased inspection frequency satisfies the proximity analysis requirement.

The Local Community Organizations proposed an alternate rule to establish shorter repair deadlines for leaks discovered at well production facilities within 1,000 feet of an occupied area. The Local Community Organizations, industry, and the Division negotiated and agreed to the final language adopted by the Commission. For leaks identified at a well production facility located within 1,000 feet of an occupied area, operators must make a first attempt to repair the leak as soon as practicable, but no later than five working days after discovery of the leak. If repair cannot be completed within five days and the leak is not stopped using other means, the owner or operator must notify the local government with jurisdiction over the location and the Division. Reasons why an operator may be unable to attempt or complete repair within five days include, among other things, inclement weather that prevents a timely repair or repair attempt or delays in procuring necessary heavy equipment and workover rigs. The industry parties also raised the issue about local government or other agency requirements potentially delaying repair. Such impacts to repair schedules should be considered as the program is implemented.

The Commission notes that it will be the operator's responsibility to demonstrate the need for the delay beyond five working days, and the Commission expects that operators will be able to explain the types of reasonable efforts the operator undertakes to avoid the delay (e.g., reasonable efforts in procuring the equipment). If a leak is detected at a facility without a proximity analysis, operators may conduct a proximity analysis and may follow the repair deadlines in Section II.E.7.a. if there are no occupied areas within 1,000 feet.

Consistent with the existing LDAR program, leaks detected are not subject to enforcement by the Division so long as the operator complies with the repair and recordkeeping requirements of Section II.E. However, as the Commission noted in 2014 and again in 2017, the Commission does not intend to relieve owners or operators of the obligation to comply with the general requirements of Part D, Sections I.C, II.B, or II.C (as applicable), including the requirements to minimize emissions and to operate without venting.

Further, these revisions will correct any typographical, grammatical, and formatting errors found within the regulation.

Incorporation by Reference

§ 24-4-103(12.5) of the State Administrative Procedure Act allows the Commission to incorporate by reference federal regulations. The criteria of §24-4-103(12.5) are met by including specific information and making the regulations available because repeating the full text of each of the federal regulations incorporated would be unduly cumbersome and inexpedient. To fully comply with these criteria, the Commission included reference dates to rules and reference methods incorporated in Regulation Number 7, Part E, Section II.

Additional Considerations

Colorado must revise Colorado's ozone SIP to address the serious ozone nonattainment area requirements. The CAA does not expressly address all of the provisions adopted by the Commission. Rather, federal law establishes the ozone NAAQS and requires Colorado to develop a SIP adequate to attain the NAAQS. Therefore, the Commission adopted certain revisions to Regulation Number 7 to satisfy Colorado's serious nonattainment area obligations.

The Commission also adopted revisions to Regulation Number 7 to achieve further emission reductions in the oil and gas sector.

In accordance with §§ 25-7-105.1 and 25-7-133(3), CRS, the Commission states the rules in Part D, Section II. of Regulation Number 7 adopted in this rulemaking are state-only requirements and are not intended as additions or revisions to Colorado's SIP at this time.

These revisions do not exceed or differ from the federal act due to state flexibility in determining what control strategies to implement to reduce emissions. However, where the proposal may differ from federal rules under the federal act, in accordance with § 25-7-110.5(5)(b), CRS, the Commission determines

- (I) The revisions to Regulation Number 7 address equipment and operations in the oil and gas sector including fugitive emissions from components. NSPS OOOO and NSPS OOOOa may also apply to such oil and gas facilities and operations. The revisions to Regulation Number 7 apply on a broader basis to more fugitive emissions components than the NSPS. The Commission revised Regulation Number 7 to include regulatory RACT requirements for Colorado's major sources of VOC and/or NOx (≥ 50 tpy) in the SIP. Specifically, the Commission revised Regulation Number 7, Part B, Section I. and Part E, Sections II. and V. to include categorical regulatory RACT requirements. MACT DDDDD, MACT JJJJJJ, MACT ZZZZ, MACT YYYY, NSPS GG, NSPS KKKK, NSPS IIII, and NSPS JJJJ may apply to such combustion equipment. However, the Regulation Number 7 revisions apply on a broader basis to more combustion equipment.
- (II) The federal rules discussed in (I) are primarily technology-based in that they largely prescribe the use of specific technologies or work practices to comply. EPA has provided some flexibility in NSPS OOOOa by allowing a company to apply to EPA for an alternative means of emission limitations for fugitive emissions components.
- (III) The CAA establishes the 2008 NAAQS and requires Colorado to develop SIP revisions that will ensure attainment of the NAAQS. The ozone NAAQS was not determined taking into account concerns unique to Colorado. Similarly, EPA develops NSPS or NESHAP considering national information and data, not Colorado specific issues or concerns. In addition, Colorado cannot rely exclusively on a federally enforceable permit or federally enforceable NSPS or NESHAP to satisfy Colorado's Moderate nonattainment area RACT obligations. Instead, Colorado can adopt applicable provisions into its SIP directly, as the Commission has done here.

- (IV) In addition to the 2008 NAAQS, Colorado must also comply with the lower 2015 ozone NAAQS. These current revisions may improve the ability of the regulated community to comply with new requirements needed to attain the lower NAAQS insofar as RACT analyses and efforts conducted to support the revisions adopted by the Commission may prevent or reduce the need to conduct additional RACT analyses for the more stringent NAAQS.
- (V) EPA has established a Serious SIP-RACT implementation deadline of July 20, 2021, for strategies not needed for any attainment demonstration. There is no timing issue that might justify changing the time frame for implementation of federal requirements.
- (VI) The revisions to Regulation Number 7 strengthen Colorado's SIP and state-only provisions. These sections currently address emissions from the oil and gas sector in a cost-effective manner, allowing for continued growth of Colorado's oil and gas industry. The revisions to Regulation Number 7, Part C, Sections I. recognize practices currently utilized by wood coating operations. The revisions to Regulation Number 7, Part E, also consider specific existing major sources of VOC and NOx, allowing for continued growth at Colorado's major sources.
- (VII) The revisions to Regulation Number 7 Part D establish reasonable equity for oil and gas owners and operators subject to these rules by providing the same standards for similarly situated and sized sources. The revisions to Regulation Number 7, Part C and Part E similarly establish the categorical RACT requirements for similarly situated and sized sources.
- (VIII) If EPA does not approve Colorado's SIP, EPA may promulgate a Federal Implementation Plan; thus potentially determining RACT for Colorado's sources. This outcome may subject others to increased costs.
- (IX) Where necessary, the revisions to Regulation Number 7 include minimal monitoring, recordkeeping, and reporting requirements that correlate, where possible, to similar federal or state requirements.
- (X) Demonstrated technology is available to comply with the revisions to Regulation Number 7. Some of the revisions expand upon requirements already applicable, such as the requirements for component leaks. Other revisions reflect changes in industry practice, such as for wood coating and foam manufacturing. Similarly, the revisions concerning major sources of VOC and NOx generally reflect current emission controls and work practices.
- (XI) As set forth in the Economic Impact Analysis, the revisions to Regulation Number 7 will reduce emissions in a cost-effective manner.
- (XII) Alternative rules could also provide reductions in ozone, VOC, NOx, methane, and other hydrocarbons to address SB 19-181 and help to attain the NAAQS. The Commission determined that the Division's proposal was reasonable and cost-effective. However, a no action alternative would very likely result in an unapprovable SIP.

As part of adopting the revisions to Regulation Number 7, the Commission has taken into consideration each of the factors set forth in CRS § 25-7-109(1)(b).

Colorado must revise Colorado's ozone SIP to address the serious nonattainment area requirements. However, to the extent that CRS § 25-7-110.8 requirements apply to this rulemaking, and after considering all the information in the record, the Commission hereby makes the determination that:

- (I) These rules are based upon reasonably available, validated, reviewed, and sound scientific methodologies, and the Commission has considered all information submitted by interested parties.

- (II) Evidence in the record supports the finding that the rules shall result in a demonstrable reduction of methane, VOCs, and other hydrocarbons.
- (III) Evidence in the record supports the finding that the rules shall bring about reductions in risks to human health and the environment that justify the costs to implement and comply with the rules.
- (IV) The rules are the most cost-effective to achieve the necessary and desired results, provide the regulated community flexibility, and achieve the necessary reduction in air pollution.
- (V) The rule will maximize the air quality benefits of regulation in the most cost-effective manner.

V. February 18, 2021 (Part D, Section III.)

This Statement of Basis, Specific Statutory Authority, and Purpose complies with the requirements of the State Administrative Procedure Act, § 24-4-103(4), C.R.S., the Colorado Air Pollution Prevention and Control Act, §§ 25-7-101, C.R.S., et. seq., and the Air Quality Control Commission's (Commission) Procedural Rules, 5 Code Colo. Reg. §1001-1.

Basis

During the 2019 legislative session, Colorado's General Assembly adopted revisions to several Colorado Revised Statutes in Senate Bill 19-181 (SB 19-181) (Concerning additional public welfare protections regarding the conduct of oil and gas operations) that include directives for the Commission. SB 19-181 revised the Air Quality Control Commission's directives in § 25-7-109, CRS, to consider pneumatic device requirements. Additionally, in HB 19-1261, the legislature mandated a 26% reduction in GHG by 2025, 50% by 2030, and 90% by 2050 (from a 2005 baseline), §§ 25-7-102(2)(g), 25-7-105(1)(e)(II), CRS.

Further, on December 26, 2019, the Environmental Protection Agency (EPA) reclassified the Denver Metro North Front Range (DMNFR) to Serious, after 2015-2017 ozone data failed to show attainment of the 2008 8-hour Ozone National Ambient Air Quality Standard (NAAQS). See 84 Fed. Reg. 247 (December 26, 2019). As a Serious area, the major source threshold lowers from 100 tons per year (tpy) of VOC or NO_x to 50 tpy. EPA has also designated the DMNFR as Marginal nonattainment for the 2015 ozone NAAQS of 70 ppb. Therefore, to further minimize emissions from the oil and gas sector and ensure progress towards attainment of the 2008 and 2015 ozone NAAQS and necessary greenhouse gas emission reductions, the Commission is adopting revisions to Regulation Number 7 to require non-emitting controllers in certain situations.

Statutory Authority

The Colorado Air Pollution Prevention and Control Act, specifically § 25-7-105(1), directs the Commission to promulgate such rules and regulations as are consistent with the legislative declaration set forth in § 25-7-102 and that are necessary for the proper implementation and administration of Article 7. The Act broadly defines air pollutant to include essentially any gas emitted into the atmosphere (and, as such, includes VOC, NO_x, methane and other hydrocarbons) and provides the Commission broad authority to regulate air pollutants. § 25-7-106 provides the Commission maximum flexibility in developing an effective air quality program and promulgating such combination of regulations as may be necessary or desirable to carry out that program. § 25-7-106 also authorizes the Commission to promulgate emission control regulations applicable to the entire state, specified areas or zones, or a specified class of pollution. § 25-7-106(6) further authorizes the Commission to require owners and operators of any air pollution source to monitor, record, and report information.

§§ 25-7-109(1)(a), (2), and of the Act authorize the Commission to promulgate regulations requiring effective and practical air pollution controls for significant sources and categories of sources, emission control regulations pertaining to nitrogen oxides and hydrocarbons, and emissions control regulations pertaining to the storage and transfer of petroleum products and other VOCs. § 25-7-109(2)(c), in particular, provides broad authority to regulate hydrocarbons. § 25-7-109(10) directs the Commission to adopt emission control regulations to minimize emissions of methane, other hydrocarbons, VOC, and NO_x from oil and gas operations.

Purpose

The following section sets forth the Commission's purpose in adopting the revisions to Regulation Number 7 and includes the technological and scientific rationale for the adoption of the revisions. The revisions also correct typographical, grammatical, and formatting errors found through the regulation. As discussed, SB 19-181 identifies specific requirements the Air Quality Control Commission should consider, including pneumatic controller requirements. In December 2019, the Commission expanded the pneumatic controller inspection and maintenance requirements, adopted in 2017, from nonattainment area applicability to statewide applicability.

As part of that rulemaking, the Commission directed the Statewide Hydrocarbon Emission Reduction (SHER) team and Pneumatic Controller Task Force (PCTF), stakeholder processes directed by the Commission in 2017, to continue their stakeholder processes and bring to the Commission in 2020 their recommendations on the use of zero-bleed pneumatic devices. Both the SHER team and PCTF continued to meet through the spring of 2020. The stakeholder discussions from 2017-2020 informed the Commission's adopted provisions regarding non-emitting controllers. Non-emitting controllers are a broader category than no-bleed pneumatic controllers and can include, but are not limited to, air-driven controllers, mechanical controllers, electric controllers, self-contained controllers and controllers where exhaust gas is routed to a combustion device.

Definitions

The Commission took the opportunity to amend the definitions associated with pneumatic controllers to reflect more accurate and appropriate technical definitions. The definition of "intermittent pneumatic controller" is intended to include controllers that are not designed to have a continuous bleed rate. Although intermittent pneumatic controllers are not designed to emit between actuations, de minimis emissions may occur between actuations. Such de minimis emissions do not alter a controller's classification as "intermittent."

New Facilities and Certain Retrofits

The revisions to Regulation Number 7 adopted in this rulemaking require the use of non-emitting controllers at well production facilities and natural gas compressor stations that commence operations on or after May 1, 2021. The revisions also require retrofits of natural gas emitting pneumatic controllers to non-emitting controllers at well production facilities where a well first begins production or is recompleted or refractured on or after May 1, 2021 and at natural gas compressor stations that increase horsepower on or after May 1, 2021.

Company-wide plans

Additionally, the Commission has required operators with well production facilities or natural gas compressor stations that commenced operations prior to May 1, 2021 to develop plans on a company-wide basis to convert some of such facilities to use non-emitting controllers. For purposes of Section III.C.4, retrofit refers to converting a natural gas emitting pneumatic controller to a non-emitting controller. Plugging and abandoning an existing well production facility constitutes an alternative method of compliance with retrofit requirements as described in Section III.C.4.c.(iii).

Specifically, the Commission has adopted a program that requires owners or operators of well production facilities that commenced operations prior to May 1, 2021 to determine the percentage of their total liquids production at facilities with non-emitting controllers. Facilities that commenced operation prior to May 1, 2021 shall be included in the relevant (well production or compressor station) companywide plan, and the companywide plan shall reflect operations as of May 1, 2021. If any of the events described in Sections III.C.4.a.(ii) or (iii) occur on or after May 1, 2021 and before May 1, 2023, then the owner or operator may count, as applicable, the: (1) percentage of production allocated to that facility as of May 1, 2021 as retrofit for purposes of the well production facility companywide plan; or (2) the pneumatic controllers emitting to atmosphere as of May 1, 2021 as retrofit for purposes of the compressor station companywide plan.

Where facility production must be estimated pursuant to Section III.C.4.c.(ii)(A)(3), owners or operators will follow the same process that would be used to establish permit limitations on production throughput, such as summation of anticipated production curves. Of note, if a facility operating in 2019 was subsequently acquired by a new operator, then the facility (and its percent of production) is associated with the company-wide plan of the entity owning the facility as of May 1, 2021.

Based upon this percentage, operators will be required to retrofit facilities incrementally by May 1, 2022 and May 1 2023; the required retrofits correspond to an increasing percentage of each operator's total liquids production flowing through facilities with non-emitting controllers. The incremental percentage increases for well production facilities are found in Table 1. Operators that increase their total non-emitting facility percent production up to a specified threshold are not required to achieve the entire incremental percentage increase that would otherwise apply for that year. However, the minimum incremental increases and specified thresholds do not restrict operators from exceeding the requirements.

Each well production facility operator is required to submit a company-wide plan by September 1, 2021 that lists specific information regarding its facilities that commenced operations prior to May 1, 2021, its total liquids production, facilities with non-emitting controllers, total percentage of liquid production flowing through facilities with non-emitting controllers, and the facilities that the operator intends to retrofit or plug and abandon in order to achieve the incremental increases in total liquids production flowing through facilities with non-emitting controllers. This company-wide plan should be updated in July 2022, with a final company- wide plan reflecting all facilities that were retrofit or plugged and abandoned submitted in July 2023.

The Commission has also required operators of natural gas compressor stations that commenced operations prior to May 1, 2021 to develop plans on a company-wide basis to convert pneumatic controllers at such facilities to non-emitting controllers. Specifically, the Commission has adopted a program that requires operators to determine the percentage of emitting and non-emitting pneumatic controllers and based upon that percentage, operators will be required to increase the percentage of non-emitting controllers incrementally by May 1, 2022 and May 1, 2023. The incremental percentage requirements for natural gas compressor stations are found in Table 2. As for well production facilities, operators that increase their total percentage of non-emitting controllers up to a specified threshold are not required to achieve the entire percentage increase for that year that would otherwise apply. The minimum percentage increases and specified thresholds do not restrict operators from exceeding these requirements.

Each operator is required to submit a company-wide plan by September 1, 2021 that lists specific information regarding its facilities that commenced operations prior to May 1, 2021, total controllers, percentage of emitting and non-emitting controllers, the required incremental increases in non-emitting controllers, and the pneumatic controllers that the operator intends to retrofit or remove from service to achieve the incremental increases in non-emitting controllers.

For well production facilities and natural gas compressor stations, an owner or operator may elect to combine facilities with other owners or operators that are owned or operated by the same parent company in complying with company-wide compliance plan requirements.

At this time, operators will not be subject to the requirement to retrofit pneumatic controllers if they have facilities that on a company-wide basis, and taking into account only wells that produced oil or gas or both in calendar year 2019, averaged 15 barrels of oil and gas equivalent ("BOE") or less per day per well. However, in 2021, the Commission plans to consider additional emission reductions for the oil and gas sector that would enable the state to meet its ambitious climate goals as set forth in HB 19-1261. The Commission directs the Division to consider whether additional requirements to reduce emissions at the sites not subject to retrofit pursuant to Section III.C.4.c.(iv), including retrofit of pneumatic controllers, should be included in that rulemaking.

The requirement to submit an acknowledgement or certification under Sections III.C.4.c.(v) and III.C.4.d.(v) (regarding sale or transfer) does not apply to well production facilities or natural gas compressor stations that, at the time of sale or transfer are not intended to and will not be used to achieve the Total Required Non-Emitting Facility Percent Production or Total Required Non-Emitting Percent Controller target, as applicable. The following are each an acceptable means of ensuring compliance with Section III. following transfer through which owners or operators shall satisfy their obligations under Section III.C.4.c.(v) or Section III.C.4.d.(v), as applicable:

Example 1: Operator A has a Total Historic Non-Emitting Facility Percent Production of 61%. Operator A is required to achieve an additional 5% of non-emitting facility percent production by May 1, 2022, and an additional 10% by May 1, 2023, with a Total Required Non-Emitting Facility Percent Production target of 76%. Operator A achieves the additional 5% of non-emitting facility percent production by May 1, 2022. In 2023, prior to May 1, Operator A transfer's ownership to Operator B of two well production facilities that Operator A had intended to retrofit with non-emitting controllers or plug and abandon in order to achieve its Total Required Non-Emitting Facility Percent Production. Retrofitting or plugging and abandoning those two facilities would have comprised half of the additional production required by May 1, 2023 (i.e., 5% of Total Required Non-Emitting Facility Percent Production).

Scenario 1: Notwithstanding the transfer, Operator A may find an alternative 5% of Total Historic Production remaining in its Company-Wide Plan to achieve its Total Required Non-Emitting Facility Percent Production. In this case, Operator A does not need to submit an acknowledgement or certification upon transfer, but shall include this information in its next update to the Company-Wide Plan. This example would apply equally to transfers of assets subject to a Company-Wide Compressor Station Pneumatic Controller Compliance Plan.

Scenario 2: Operator A submits an acknowledgement, on a Division-approved form, that it will ensure the transferred asset is retrofit by May 1, 2023. Under this scenario, either Operator A or Operator B may undertake any necessary retrofitting (or plugging and abandonment) of the asset to allow Operator A to take credit for retrofit of the 5% of Total Historic Production, provided, however, that Operator A will remain responsible for retrofit of that asset to achieve its Total Required Non-Emitting Facility Percent Production. This means that if retrofit of the asset is not completed for whatever reason, Operator A would have to find an alternative 5% of Total Historic Production remaining in its Company-Wide Plan to achieve its Total Required Non-Emitting Facility Percent Production by May 1, 2023.

Scenario 3: Operator A submits an acknowledgement, on a Division-approved form, that it plans to use the transferred asset to achieve its Total Required Non-Emitting Facility Percent Production and Operator B certifies, on a Division-approved form, that it will retrofit the transferred asset by May 1, 2023. Upon certification by Operator B, Operator A shall receive credit for the retrofit of the 5% of Total Historic Production towards its applicable targets under Section III.C.4. The Division-approved form must include a statement that Operator B assumes Operator A's Section III.C.4 obligations with respect to the transferred asset and is, therefore, subject to the Division's enforcement authority in the event of noncompliance. Acquisition of the asset does not alter the calculation of Operator B's compliance with the percentage thresholds specified in Table 1 or 2 for its own Company-Wide Plan, if applicable.

Example 2: Operator A has a Total Historic Non-Emitting Facility Percent Production of 61% and a Total Required Non-Emitting Facility Percent Production target of 76%. Operator B has a Total Historic Non-Emitting Facility Percent of 21% and a Total Required Non-Emitting Facility Percent Production target of 56%. Operator A and Operator B merge (or one entity acquires the other) in 2023, prior to May 1. Despite the merger, the resulting ownership of Operators A and B must continue to separately comply with the respective Company-Wide Plans and Total Required Non-Emitting Facility Percent Production targets of Operator A and Operator B that existed prior to merger.

Exemptions for Specific Controllers

The Commission has recognized that there are appropriate circumstances where even non-emitting facilities may need to use pneumatic controllers that emit natural gas to the atmosphere. Section III.C.4.e.(i)(A) authorizes use of pneumatic controllers necessary for a safety or process purpose that cannot otherwise be met without emitting natural gas. Starting May 1, 2021, new well production facilities or facilities where a well first begins production or is recompleted or refractured, and new compressor stations or stations that increase horsepower, must submit a justification for any safety or process exemption to the Division for approval 45 days prior to installation of the emitting device or retrofit of the facility. Owners or operators that intend to rely on this exemption to maintain emitting controllers at facilities that are retrofit under a company-wide plan must submit a justification to the Division 45 days prior to retrofit of the facility.

The Commission notes that the rule may not be effective 45 days prior to May 1, 2021. If so, for well production facilities and natural gas compressor stations commencing operation or taking actions described in Sections III.C.4.a.(ii) or (iii) on or after May 1, 2021 but prior to June 1, 2021, the owner or operator shall submit the justification required in Section III.C.4.e.(i)(A)(1) by May 1, 2021, and the justification shall be deemed approved unless denied prior to commencing operation or prior to the time the actions described in Sections III.C.4.a.(ii) or (iii) occur. Section III.C.4.e.(i)(A), the requirement to seek Division approval is not applicable for: (1) well production facilities that qualify as contributing to Historic Non-Emitting Facility Percent Production, as defined in Section III.C.4.c.(ii)(D)(1) to (2), or (2) compressor stations that commenced operation before May 1, 2021.

Section III.C.4.e.(i)(B) authorizes use of pneumatic controllers that emit natural gas for activities that occur prior to the end of flowback and well abandonment activities. In addition, Section III.C.4.e.(i)(C) allows owners or operators, upon notice to the Division, to use temporary and portable equipment with pneumatic controllers that emit natural gas for sixty days for purposes other than increasing the throughput of the facility. The Commission directs the Division to develop a streamlined mechanism for filing these notifications, including evaluating the potential for electronic notification. Owners or operators must request Division approval to extend the sixty-day timeframe and must do so at least fourteen days prior to the end of the exemption period. Owners or operators utilizing temporary or portable equipment with pneumatic controllers that emit natural gas must conduct AVO and AIMM inspections of those controllers on the same schedule as the associated well production facility or compressor station under Section II.E., and must comply with the repair, recordkeeping, and reporting requirements of Sections II.E.6 through 9.

The requirement to use non-emitting pneumatic controllers at sites that commenced operations on or after May 1, 2021, or where one or more wells first begin production or are recompleted or refractured on or after May 1, 2021 does not apply in certain applications at some wellheads located away from the associated production facilities. Additionally, operators that have or retrofit well production facilities to be non-emitting pursuant to the company-wide plan may not be required to use non-emitting controllers in certain applications at some wellheads located away from the associated production facilities.

As set forth in Section III.C.4.e.(i)(D), operators may use natural gas actuated pneumatic controllers that emit to the atmosphere to control emergency shutdown devices or artificial lift control at a wellhead if the wellhead is located more than one quarter of a mile from the associated well production facility for well production facilities commencing operations on or after May 1, 2021, or for wellheads not located on the same surface disturbance for well production facilities commencing operations prior to May 1, 2021. Any other pneumatic controllers (e.g. those not used as emergency shutdown devices or for artificial lift control) located at the wellheads within the specified distance from the associated production facilities must be non-emitting, unless the operator submits a justification for use of an emitting controller to the Division for approval at least 45 days prior to installation of the emitting device or retrofit of the facility or by July 1, 2021 for well production facilities that commenced operations prior to May 1, 2021 and the operator intends to be reflected as non-emitting in the company-wide plan.

The Commission notes that the rule may not be effective 45 days prior to May 1, 2021. If so, for well production facilities commencing operation or taking actions described in Section III.C.4.a.(ii) on or after May 1, 2021 but prior to June 1, 2021, the owner or operator shall submit the justification required in Section III.C.4.e.(i)(D)(1) by May 1, 2021, and the justification shall be deemed approved unless denied prior to commencing operation or prior to the time the actions described in Section III.C.4.a.(ii) occur. The one quarter mile measurement associated with distance from the wellhead to the well production facility shall be measured from the wellhead to the closest equipment associated with the well production facility.

To qualify for the exemption in Section III.C.4.e.(i)(D), the operator must use an approved instrument monitoring method and AVO to detect leaks at the wellhead at the same frequency as the associated well production facility as set forth in Table 3 of Section II.E.4, which sets forth the frequency of component inspections, or no less than once per year, whichever is greater. For facilities that commenced operations prior to May 1, 2021, this monitoring requirement will begin on May 1, 2022, or the date the facility is converted to a site with only non-emitting controllers, whichever is later. The Commission recognizes that wellheads may sometimes be difficult to inspect due to land access issues or severe weather and has adopted provisions allowing operators to delay inspections until access is restored. Owners or operators also may utilize OGI camera-equipped aerial drones to perform these wellhead inspections to provide frequent leak detection and further promote the advancement of leak detection methodologies - both of which are foundational to Colorado's find and fix approach to leak detection. At the same time, the Commission believes this application of OGI requires rethinking of the methodology generally used for land based OGI applications.

Thus, the provisions of Section III.C.4.e.(i)(D)(3) allowing for the use of OGI camera-equipped aerial drones to inspect wellhead equipment apply on a limited basis, as state-only provisions and do not by themselves authorize the use of drones to inspect other equipment or constitute approval of drones as alternative AIMM. Operators must develop their own methodology before using OGI camera-equipped aerial drones and make that methodology available to the Division upon request. The methodology must include, at a minimum, procedures for: determining maximum wind speed during which the inspection can be performed; determining the maximum viewing distance from the equipment; how the operator will ensure an adequate thermal background is present to view potential leaks; how the operator will deal with adverse monitoring conditions, such as wind; and how the operator will deal with interferences. At a minimum, any drone inspection must ensure line of sight from the drone to all wellhead equipment and components and take place when the drone-mounted camera is close enough to the wellhead equipment and components to achieve sensitivity for detection of emissions similar to the sensitivity commonly achieved during OGI inspections carried out with hand-carried infrared cameras. Furthermore, the Commission directs the parties to this rulemaking that wish to participate to jointly recommend an OGI camera-equipped aerial drone usage methodology to the Division's Alternative AIMM Team by May 2022, for further review and consideration.

Finally, operators may not use this exemption where equipment with natural gas emitting pneumatic controllers other than the wellhead, such as a separator, is located at the wellhead site. Under those circumstances, emitting pneumatic controllers used for emergency shut down control may still qualify for the safety and process exemption under Section III.C.4.e.(i)(A) where the necessary conditions and approvals for that exemption are met.

Tagging of Controllers

In order to assist in ease of identification of pneumatic controllers that are authorized to emit natural gas to the atmosphere, the Commission has required operators to tag pneumatic controllers that are authorized to emit natural gas to the atmosphere pursuant to the specified exemptions in Section III.C.4.e. (i) at wellhead production facilities which are non-emitting and at natural gas compressor stations that have one or more non-emitting controllers. Natural gas compressor station operators must differentiate between emitting pneumatic controllers that are exempt under Section III.C.4.e.(i) and those that are not identified as non-emitting controllers in the company-wide plan and are, thus, not required to retrofit. The requirement to tag pneumatic controllers that emit natural gas pursuant to Sections III.C.4.e.(i)(A) through (D) does not apply at well production facilities that are not required to be non-emitting or elected to be non-emitting pursuant to the company-wide plan requirements. In each instance where the regulation references a requirement to use non-emitting controllers, such reference is limited by the exemptions allowing the use of pneumatic controllers to emit natural gas to atmosphere as set forth in the regulation.

Recordkeeping

Operators of well production facilities or natural gas compressor stations must keep the following records for five years, and make them available to the Division upon request: (1) Records of the date a well production facility completes retrofit or all wells flowing to the well production facility are plugged and abandoned, or the date the natural gas compressor station pneumatic controllers were retrofit or it is taken out of service, (2) If claiming an exemption for an emitting pneumatic controller, records for each controller demonstrating the exemption applies, (3) Copies of the Company-Wide Well Production Facility Pneumatic Controller Compliance Plan and Company-Wide Compressor Station Pneumatic Controller Compliance Plans, (4) For any operator utilizing III.C.4.c.(iv), the records described in Section III.C.4.c.(iv) that demonstrate the owner or operator qualifies under that provision, and (5) For each pneumatic controller required to be tagged pursuant to Sections III.C.4.d.(iv), III.C.4.d.(vi)(B), III.C.4.e.(ii), or III.C.4.e.(iii), a list of each tagged pneumatic controller, equipment location, and its tag identification number.

In accordance with §§ 25-7-105.1 and 25-7-133(3), CRS, the Commission states the rules in Part D, Section II of Regulation Number 7 adopted in this rulemaking are state-only requirements and are not intended as additions or revisions to Colorado's SIP at this time, other than those revising definitions currently in the SIP.

These revisions do not exceed or differ from the federal act due to state flexibility in determining what control strategies to implement to reduce emissions. However, where the proposal may differ from federal rules under the federal act, in accordance with § 25-7- 110.5(5)(b), CRS, the Commission determines:

- (I) The revisions to Regulation Number 7 address equipment and operations in the oil and gas sector including natural gas-driven pneumatic controllers. NSPS OOOO and NSPS OOOOa may also apply to such oil and gas facilities and operations. The revisions to Regulation Number 7 apply on a broader basis to more natural gas-driven pneumatic controllers than the NSPS.

- (II) The Federal rules discussed in (I) are primarily technology-based in that they largely prescribe the use of specific technologies or work practices to comply. EPA has provided some flexibility in NSPS OOOOa by allowing a company to apply to EPA for an alternative means of emission limitations.
- (III) The revisions to Regulation Number 7 strengthen Colorado's state-only provisions. These revisions currently address emissions from the oil and gas sector in a cost-effective manner, allowing for continued growth of Colorado's oil and gas industry.
- (IV) The revisions to Regulation Number 7, Part D establish reasonable equity for oil and gas owners and operators subject to these rules by providing the same standards for similarly situated and sized sources.
- (V) Where necessary, the revisions to Regulation Number 7 include monitoring, recordkeeping, and reporting requirements that correlate, where possible, to similar federal or state requirements.
- (VI) Demonstrated technology is available to comply with the revisions to Regulation Number 7. Some of the revisions expand upon requirements already applicable, such as the requirements for pneumatic controllers.
- (VII) As set forth in the Economic Impact Analysis, the revisions to Regulation Number 7 will reduce emissions in a cost-effective manner.
- (VIII) Alternative rules could also provide reductions in ozone, VOC, methane, and other hydrocarbons to address SB 19-181 and help to attain the NAAQS. SB 19- 181 specifically directs the Commission to "consider" revising its rules to adopt more stringent requirements related to pneumatic devices. The Commission determined that the alternate proposal was reasonable and cost-effective.

As part of adopting the revisions to Regulation Number 7, the Commission has taken into consideration each of the factors set forth in CRS § 25-7-109(1)(b).

To the extent that CRS § 25-7-110.8 requirements apply to this rulemaking, and after considering all the information in the record, the Commission hereby makes the determination that:

- (I) These rules are based upon reasonably available, validated, reviewed, and sound scientific methodologies, and the Commission has considered all information submitted by interested parties.
- (II) Evidence in the record support the finding that the rules shall result in a demonstrable reduction of methane, VOCs, and other hydrocarbons.
- (III) Evidence in the record supports the finding that the rules shall bring about reductions in risks to human health and the environment that justify the costs to implement and comply with the rules.
- (IV) The rules are the most cost-effective to achieve the necessary and desired results, provide the regulated community flexibility, and achieve the necessary reduction in air pollution.
- (V) The rule will maximize the air quality benefits of the regulation in the most cost-effective manner.

W. July 16, 2021 (Part C, Section I., Part D, Section III., Part E, Section II.)

This Statement of Basis, Specific Statutory Authority, and Purpose complies with the requirements of the State Administrative Procedure Act, § 24-4-103(4), C.R.S., the Colorado Air Pollution Prevention and Control Act, §§ 25-7-101, C.R.S., et. seq., and the Air Quality Control Commission's (Commission) Procedural Rules, 5 Code Colo. Reg. §1001-1.

Basis

On December 26, 2019, the Environmental Protection Agency (EPA) reclassified the Denver Metro North Front Range (DMNFR) to Serious, after 2015-2017 ozone data failed to show attainment of the 2008 8-hour Ozone National Ambient Air Quality Standard (NAAQS). See 84 Fed. Reg. 247 (December 26, 2019). As a Serious area, the major source threshold lowers from 100 tons per year (tpy) of VOC or NOx to 50 tpy. Currently, the DMNFR is also designated as Marginal nonattainment for the 2015 ozone NAAQS of 70 ppb. To ensure progress towards attainment of the 2008 and 2015 ozone NAAQS, the Commission is adopting revisions to Regulation Number 7 to include reasonably available control requirements (RACT) for process heaters at major sources of NOx emissions and metal parts surface coating.

Statutory Authority

The State Air Act, specifically § 25-7-105(1), directs the Commission to promulgate such rules and regulations as are consistent with the legislative declaration set forth in § 25-7-102 and that are necessary for the proper implementation and administration of Article 7. The Act broadly defines air pollutant to include essentially any gas emitted into the atmosphere (and, as such, includes VOC, NOx, methane and other hydrocarbons) and provides the Commission broad authority to regulate air pollutants.

Section 105(1)(a)(I) directs the Commission to adopt a state implementation plan (SIP) to attain the NAAQS. § 25-7-106 provides the Commission maximum flexibility in developing an effective air quality program and promulgating such combination of regulations as may be necessary or desirable to carry out that program. § 25-7-106 also authorizes the Commission to promulgate emission control regulations applicable to the entire state, specified areas or zones, or a specified class of pollution. § 25-7-106(6) further authorizes the Commission to require owners and operators of any air pollution source to monitor, record, and report information. §§ 25-7-109(1)(a) and (2) of the Act authorize the Commission to promulgate regulations requiring effective and practical air pollution controls for significant sources and categories of sources and emission control regulations pertaining to nitrogen oxides and hydrocarbons.

Purpose

The following section sets forth the Commission's purpose in adopting the revisions to Regulation Number 7, and includes the technological and scientific rationale for the adoption of the revisions. The Commission is revising Regulation Number 7 to include provisions in the SIP that require the implementation of RACT for process heaters at major sources of NOx emissions and metal parts surface coating. The revisions also correct typographical, grammatical, and formatting errors found through the regulation.

Metal parts coating

The Commission has previously adopted requirements for metal surface coating based on recommendations in EPA's Control of Volatile Organic Emissions from Existing Stationary Sources – Volume VI: Surface Coating of Miscellaneous Metal Parts and Products (1978), including VOC content limits, work practices, and recordkeeping requirements. However, EPA published a subsequent metal coating CTG, Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings (Metal Coating CTG), in 2008 that recommends expanding the coatings VOC content limits from four to fifty, including work practices, application methods, and recordkeeping. Therefore, in response to EPA's concern with Colorado's existing metal parts coating requirements as based on EPA's 1978 CTG, the Commission revised the metal surface coating requirements to correspond to the recommendations in the 2008 Metal Coating CTG.

Pneumatic controllers

In February 2021, the Commission adopted a consensus alternate proposal to reduce emissions from existing pneumatic controllers at well production facilities and natural gas compressor stations, in addition to the proposed emission reductions from pneumatic controllers at new and modified facilities. The Commission now adopts a revision correcting an inadvertent incorrect citation.

Major source RACT

Due to the reclassification to Serious, Colorado must submit revisions to its SIP to address the Clean Air Act's (CAA) Serious ozone nonattainment area requirements, as set forth in CAA §§ 172 and 182(c) and the final SIP Requirements Rule for the 2008 Ozone NAAQS (See 80 Fed. Reg. 12264 (March 6, 2015)). A Serious SIP revision must include provisions that require the implementation of RACT for major sources of VOC and/or NO_x (i.e., sources that emit or have the potential to emit 50 tpy or more) and for each category of VOC sources covered by a Control Technique Guideline (CTG) for which Colorado has sources in the DMNFR. Therefore, the Commission adopted revisions to Regulation Number 7 to include RACT requirements in Colorado's ozone SIP for process heaters at major sources of NO_x emissions, specifically NO_x emission limits for natural gas-fired and refinery gas-fired process heaters with a heat input rate greater than or equal to 5 MMBtu/hr.

The Commission also adopted performance testing requirements, and associated recordkeeping, for natural gas-fired and refinery gas-fired process heaters greater than or equal to 100 MMBtu/hr and natural gas-fired process heaters greater than or equal to 50 MMBtu/hr but less than 100 MMBtu/hr. The owners or operators must comply with the applicable NO_x emission limits by May 1, 2022, except where the process heater requires a permitting action or facility shut-down, in which case owners or operators must comply by May 31, 2023. The May 31, 2023, later compliance deadline for facility shut-downs is intended to provide additional time where a substantial shutdown is required to comply with the NO_x limits in Table 2, even if the entire plant is not shut down. The owners or operators of subject process heaters will continue to comply with the combustion process adjustment and associated recordkeeping requirements. The Commission also expanded these provisions to process heaters at sources that emit, or have the potential to emit, 25 tpy NO_x, in anticipation of a reclassification to Severe nonattainment. While expanding these requirements to 25 tpy sources in advance of the reclassification differs from the past timing approaches for including RACT for major sources, this expansion is limited in scope (i.e., process heaters) and the Commission does not anticipate expanding SIP RACT requirements in advance of a reclassification to become a regular practice.

Incorporation by Reference

§ 24-4-103(12.5) of the State Administrative Procedure Act allows the Commission to incorporate by reference federal regulations. The criteria of §24-4-103(12.5) are met by including specific information and making the regulations available because repeating the full text of each of the federal regulations incorporated would be unduly cumbersome and inexpedient. To fully comply with these criteria, the Commission included reference dates to rules and reference methods incorporated in Regulation Number 7, Part E, Section II.

Additional Considerations

Colorado must revise Colorado's ozone SIP to address the ozone serious nonattainment area requirements. The CAA does not expressly address all of the provisions adopted by the Commission. Rather, federal law establishes the ozone NAAQS and requires Colorado to develop a SIP adequate to attain the NAAQS. Therefore, the Commission adopted certain revisions to Regulation Number 7 to satisfy Colorado's serious nonattainment area obligations. These revisions do not exceed or differ from the federal act due to state flexibility in determining what control strategies to implement to reduce emissions. However, where the proposal may differ from federal rules under the federal act, in accordance with § 25-7-110.5(5)(b), CRS, the Commission determines:

- (I) The revisions to Regulation Number 7 address process heaters operated by refineries and the oil and gas sector. NSPS J, NSPS Ja, NSPS XX, MACT CC, and MACT UUU may also apply to petroleum refinery equipment and operations. However, the revisions to Regulation Number 7 apply on a broader basis to more process heaters.
- (II) The federal rules discussed in (I) are primarily technology-based in that they largely prescribe the use of specific technologies or work practices to comply.
- (III) The CAA establishes the 2008 NAAQS and requires Colorado to develop SIP revisions that will ensure attainment of the NAAQS. The ozone NAAQS was not determined taking into account concerns unique to Colorado. Similarly, EPA develops NSPS or NESHAP considering national information and data, not Colorado specific issues or concerns. In addition, Colorado cannot rely exclusively on a federally enforceable permit or federally enforceable NSPS or NESHAP to satisfy Colorado's ozone nonattainment area RACT obligations. Instead, Colorado can adopt applicable provisions into its SIP directly, as the Commission has done here.
- (IV) In addition to the 2008 NAAQS, Colorado must also comply with the lower 2015 ozone NAAQS. These current revisions may improve the ability of the regulated community to comply with new requirements needed to attain the lower NAAQS insofar as RACT analyses and efforts conducted to support the revisions adopted by the Commission may prevent or reduce the need to conduct additional RACT analyses for the more stringent NAAQS.
- (V) EPA has established Colorado's SIP-RACT implementation deadlines. There is no timing issue that might justify changing the time frame for implementation of federal requirements.
- (VI) The revisions to Regulation Number 7 strengthen Colorado's SIP. These sections currently address emissions from process heaters and metal parts coating in a cost-effective manner, allowing for continued growth of Colorado's industry.
- (VII) The revisions to Regulation Number 7, Parts C and E establish reasonable equity for owners and operators subject to these rules by providing the same standards for similarly situated and sized sources.

- (VIII) If EPA does not approve Colorado's SIP, EPA may promulgate a Federal Implementation Plan; thus potentially determining RACT for Colorado's sources. This outcome may subject others to increased costs.
- (IX) Where necessary, the revisions to Regulation Number 7 include minimal monitoring, recordkeeping, and reporting requirements that correlate, where possible, to similar federal or state requirements.
- (X) Demonstrated technology is available to comply with the revisions to Regulation Number 7. Some of the revisions expand upon requirements already applicable, such as the requirements for metal parts coating. The revisions concerning major sources of NO_x generally reflect current emission controls and work practices.
- (XI) As set forth in the Economic Impact Analysis, the revisions to Regulation Number 7 will reduce emissions in a cost-effective manner.
- (XII) Alternative rules could also provide reductions in ozone, VOC, and NO_x to help to attain the NAAQS. However, a no action alternative would very likely result in an unapprovable SIP.

As part of adopting the revisions to Regulation Number 7, the Commission has taken into consideration each of the factors set forth in CRS § 25-7-109(1)(b).

Colorado must revise Colorado's ozone SIP to address the ozone nonattainment area requirements. However, to the extent that CRS § 25-7-110.8 requirements apply to this rulemaking, and after considering all the information in the record, the Commission hereby makes the determination that:

- (I) These rules are based upon reasonably available, validated, reviewed, and sound scientific methodologies, and the Commission has considered all information submitted by interested parties.
- (II) Evidence in the record supports the finding that the rules shall result in a demonstrable reduction of VOCs and NO_x emissions.
- (III) Evidence in the record supports the finding that the rules shall bring about reductions in risks to human health and the environment that justify the costs to implement and comply with the rules.
- (IV) The rules are the most cost-effective to achieve the necessary and desired results, provide the regulated community flexibility, and achieve the necessary reduction in air pollution.
- (V) The rule will maximize the air quality benefits of regulation in the most cost-effective manner.

X. December 17, 2021 (Revisions to Part D, Sections I., II., III., V., and VI.)

This Statement of Basis, Specific Statutory Authority, and Purpose complies with the requirements of the State Administrative Procedure Act, § 24-4-103(4), C.R.S., the Colorado Air Pollution Prevention and Control Act, §§ 25-7-110 and 25-7-110.5., C.R.S., and the Air Quality Control Commission's (Commission) Procedural Rules, 5 Code Colo. Reg. §1001-1.

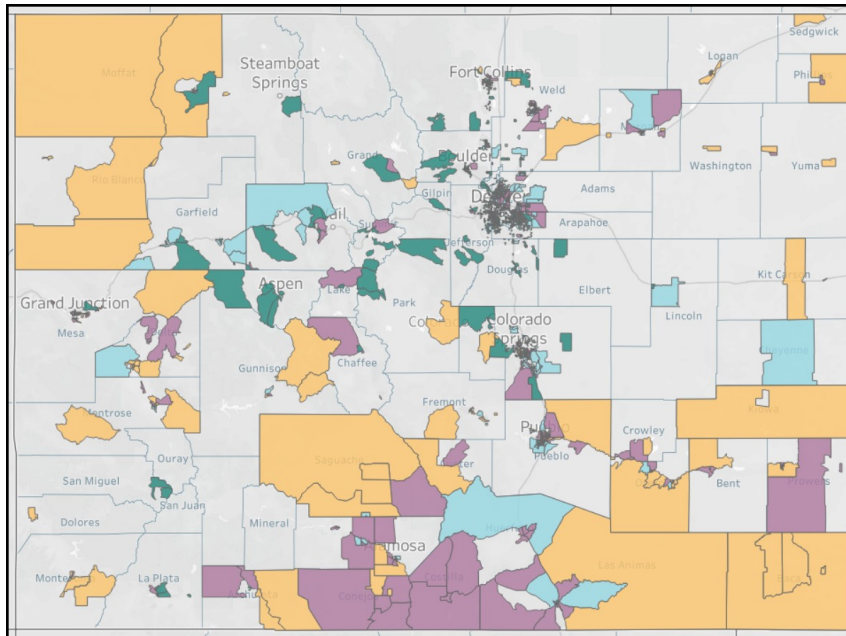
Basis

During the 2019 legislative session, Colorado's General Assembly adopted revisions to several Colorado Revised Statutes in Senate Bill 19-181 (SB 19-181) (Concerning additional public welfare protections regarding the conduct of oil and gas operations) that include directives for both the Oil and Gas Conservation Commission and the Air Quality Control Commission. Further, the General Assembly declared in House Bill 19-1261 (HB 19-1261) that "climate change adversely affects Colorado's economy, air quality and public health, ecosystems, natural resources, and quality of life[.]" acknowledged that "Colorado is already experiencing harmful climate impacts[.]" and that "many of these impacts disproportionately affect" certain disadvantaged communities. Colorado's statewide greenhouse gas (GHG) reduction goals seek a 26% reduction of statewide GHG emissions by 2025; 50% reduction by 2030; and 90% reduction by 2050 as compared to 2005 levels.

In October 2020, the Commission established a target for the oil and gas sector of a 36% reduction from the 2005 baseline by 2025 and a 60% reduction from the 2005 baseline by 2030 (an estimated 13 million metric tons (MMT) CO₂e by 2025 and 8 MMT CO₂e by 2030). Commission targets for the sector including residential, commercial, and industrial combustion emissions (RCI Sector) seek a 20% reduction from 2005 numbers by 2030. House Bill 21-1266 (HB 21-1266), signed into law on July 2, 2021, memorializes percentage reductions in statute, and provides additional requirements for the rulemakings to achieve these goals. The GHG Pollution Reduction Roadmap (GHG Roadmap) developed by the Colorado Energy Office and CDPHE identifies the largest contributors to state GHG emissions and quantifies the baselines from which these reduction percentages are to be estimated. The oil and gas industry is a large source of GHG emissions, and the largest anthropogenic source of methane in Colorado. For the oil and gas industry, not all of its emissions are found in the "O&G Sector", also referred to as the "Oil & Gas Fugitive Emissions" category of the GHG Roadmap. Methane emissions from upstream and midstream activities, along with estimates of methane "leakage" from pipelines in the transmission & storage and distribution segments, are in the O&G Sector. In contrast, most of the emissions from fuel combustion at oil and gas sources in the upstream and midstream segments are actually found in the "RCI Sector" of the GHG Roadmap (specifically in the "industrial" category, which is the subject of new HB 21-1266).

In this rulemaking action, the Commission adopted requirements for upstream and midstream segment operations, to reduce GHG emissions from those operations, sufficient - when taken in combination with other regulatory and voluntary actions across the state - to achieve the GHG reduction requirements of HB 21-1266. The Commission did not adopt regulations applicable to the transmission and storage segment or the distribution segment. With regard to the transmission and storage segment, the Commission adopted a performance-based program for this segment in 2019 designed to materially reduce greenhouse gas emissions from transmission and storage operations; reporting of progress has not yet begun under that program and the Commission believes it reasonable to evaluate the progress of that program before modifying it. The Commission did not adopt regulations applicable to the distribution segment because legislation passed in the 2021 session invests the Colorado Public Utility Commission (PUC) with authority over this segment of the oil and gas industry. SB 21-264 requires that gas distribution utilities will submit a comprehensive clean heat plan that demonstrates projected reductions in methane and carbon dioxide emissions that meet prescribed reduction targets. Each clean heat plan must outline the utility's proposal to reduce carbon dioxide and methane emission levels by 4% in 2025 and 22% in 2030. Gas distribution utilities, depending on their size, must submit clean heat plans to the PUC by August 1, 2023, and January 1, 2024. Thus, the Commission believes that the transmission & storage performance program and the clean heat plans are likely to achieve reductions of emissions necessary from these segments to achieve the goals of §25-7-105(1)(e)(XII).

In the 2021 legislative session, in HB 21-1266, the General Assembly determined that “state action to correct environmental injustice is imperative, and state policy can and should improve public health and the environment and improve the overall well-being of all communities... [and] efforts to right past wrongs and move toward environmental justice must focus on disproportionately impacted communities and the voices of their residents.” HB 21-1266 also requires the Commission to ensure that there are additional protections for, and reductions of co-pollutants in, disproportionately impacted communities. CDPHE developed a map of the disproportionately impacted communities that meet the definition of HB 21-1266. While this map is expected to change over time, the disproportionately impacted communities that have been identified at the time of this program’s adoption are as set forth in the following map:



**Meets EJ Act DI Community
definition due to...**

- Low Income
- People of Color
- Housing Burden
- More than one category

Specific Statutory Authority

The Colorado Air Pollution Prevention and Control Act, § 25-7-101, C.R.S., et seq. (the State Air Act or the Act), specifically § 25-7-105(1), directs the Commission to promulgate such rules and regulations as are consistent with the legislative declaration set forth in § 25-7-102 and that are necessary for the proper implementation and administration of Article 7. The Act broadly defines air pollutant to include essentially any gas emitted into the atmosphere and provides the Commission broad authority to regulate air pollutants. § 25-7-301 directs the Commission to develop a program providing for the attainment and maintenance of each national ambient air quality standard in each nonattainment area of the state. § 25-7-106 provides the Commission maximum flexibility in developing an effective air quality program and promulgating such combination of regulations as may be necessary or desirable to carry out that program. § 25-7-106 also authorizes the Commission to promulgate emission control regulations applicable to the entire state, specified areas or zones, or a specified class of pollution.

§ 25-7-106(6) further authorizes the Commission to require owners and operators of any air pollution source to monitor, record, and report information. § 25-7-109(10) directs the Commission to adopt emission control regulations to minimize emissions of methane, other hydrocarbons, VOC, and NO_x from oil and gas operations. Pursuant to HB 21-1266, the Commission must, by January 1, 2022, adopt regulations to ensure that the state meets its greenhouse gas reduction targets for the oil and gas sector (36% by 2025 and 60% by 2030). The Commission must also ensure that industrial sector emissions (including those from oil and gas fuel combustion equipment) are reduced by 20% from the 2015 baseline by 2030. These revisions to Regulation Number 7 will, taking into account other relevant laws and rules (including the revisions to Regulation Number 22 adopted as part of this rulemaking action), as well as voluntary actions taken by local communities and the private sector, achieve the state's GHG reduction goals through 2030 for the oil and gas industry. The revisions include protections for disproportionately impacted communities that ensure reductions of pollutants other than GHGs, additional requirements for monitoring and leak detection and repair, and improve the state's current emission inventory reporting program in Regulation Number 7, Part D.

Purpose

The following section sets forth the Commission's purpose in adopting the revisions to Regulation Number 7, Part D, and includes the technological and scientific rationale for the adoption of the revisions.

SIP revisions to address the Oil and Gas CTG: Section I.

As a moderate ozone nonattainment area, Colorado was required to revise its State Implementation Plan (SIP) to address Clean Air Act (CAA) moderate ozone nonattainment area requirements as forth in CAA § 182(b) and the final SIP Requirements Rule for the 2008 Ozone National Ambient Air Quality Standard (NAAQS) (See 80 Fed. Reg. 12264 (March 6, 2015)), including revising its SIP to include reasonably available control technology (RACT) requirements for each category of volatile organic compound (VOC) sources covered by a Control Technique Guideline (CTG) for which Colorado had sources in the Denver Metro North Front Range (DMNFR) ozone nonattainment area. EPA finalized the Oil and Gas Control Techniques Guidelines (Oil and Gas CTG) on October 27, 2016. In a 2017 rulemaking, the Commission carefully considered what recommended provisions to include in Colorado's SIP. The Commission considered its discretion in adopting recommendations in a CTG, and Colorado's already existing emission control requirements that addressed most of the same sources covered by EPA's Oil and Gas CTG but were not identical to the recommendations in the Oil and Gas CTG. The Commission submitted SIP revisions addressing the Oil and Gas CTG to EPA in May 2018.

In June 2021, EPA proposed to approve these SIP revisions (see 86 Fed. Reg. 32656). However, in September 2021, as a result of public comments received on the proposed approval, EPA requested that Colorado strengthen associated monitoring requirements for combustion devices controlling storage vessels and wet seal centrifugal compressors. In this action, the Commission adopted targeted revisions to Section I. to further align with EPA's Oil and Gas CTG. Specifically, the Commission adopted performance testing, or demonstration of manufacturer testing, for combustion equipment used to control emissions from storage vessels, as defined in EPA's Oil and Gas CTG, and wet seal centrifugal compressors.

The Commission adopted language corresponding to the recommendations in the EPA's Oil and Gas CTG and provides the following clarifications as related to purpose, intent, and terminology. Concerning the purpose of the performance test, EPA's Oil and Gas CTG recommends the performance test to demonstrate compliance with the recommended level of control, which is a 95% reduction of VOC emissions from storage vessels and a 95% reduction of VOC emissions from centrifugal compressor wet seal fluid degassing systems. As EPA discusses in the Oil and Gas CTG, if an owner or operator complies with the recommended RACT by using a combustion device, initial and periodic performance testing of the device is recommended. The performance test will demonstrate that the combustion device reduces the mass content of VOC in the gases vented to the device by at least 95% by weight.

Concerning the terms “potential for VOC emissions” and “(controlled actual emissions)” in the storage vessel applicability provision, the Commission adopted language corresponding to the recommended applicability provision in EPA’s Oil and Gas CTG, which is based on EPA’s NSPS OOOO and OOOOa. The Commission included the phrase “(controlled actual emissions)” in recognition of more extensive storage tank control requirements in Section I., as related to the recommendations in EPA’s Oil and Gas CTG for storage vessels, and not to allow an operator to use a different calculation methodology than that used to determine the storage vessel’s potential for VOC emissions. The Commission intends for the Division to determine whether storage vessels are subject to the performance testing requirement adopted in this December 2021 rulemaking, in the same manner the Division currently determines whether a storage vessel is subject to NSPS OOOO, including averaging emissions across the number of storage vessels in the battery as included in EPA’s NSPS.

Concerning “generally accepted model or calculation methodology,” “30-day period of production,” and “legally and practically enforceable limit,” the Commission also intends these phrases to be applied as the Division already applies them for NSPS OOOO. The Commission recognizes that the Division provides guidance on acceptable calculation methods and has issued guidance, “Interpretation of “Practically Enforceable” Limits for Storage Vessels Addressed under NSPS OOOO” (Oct. 15, 2013), clarifying where operators may take credit for permit required controls. The Commission intends for the Division to apply the applicability provision in Section I.E.3.a., which is the CTG recommended applicability and based on EPA’s NSPS OOOO and OOOOa, as the Division currently applies such applicability provisions under NSPS OOOO.

Definitions: Section II.A.

The Commission has adopted definitions for new terms to facilitate implementation of the new regulatory programs. Where these terms are also proposed for definition in Regulation Number 22, these explanations are intended to address both regulations.

The Commission has revised the definition of Approved Instrument Monitoring Method (AIMM) to clarify that when the Division approves an alternative AIMM, the Division’s approved AIMM may address both AIMM and AVO leak inspections.

The Commission intended to define “disproportionately impacted community” consistent with the definition in HB 21-1266. However, the statute does not specifically identify which communities are considered disproportionately impacted. CDPHE is developing a tool, called “enviroscreen” that will be utilized for members of the public and the regulated community to understand which communities in Colorado are disproportionately impacted. However, this tool was not ready at the time of this rulemaking. Therefore, the Commission has determined that the disproportionately impacted communities existing at the time of adoption of this program, and therefore the communities in which provisions of this program apply, are identified in the map. The Commission has included, in the definition of this term, a reference to the climate equity data map at which more detail can be seen of the boundaries of the disproportionately impacted communities addressed by this rulemaking. The Commission has also referenced a list of the census block groups by 12-digit FIPS code covered by the map incorporated into the definition, identifying what census blocks are disproportionately impacted communities as of the date of this rulemaking. The Commission intends that the Division will preserve a copy of the map and the accompanying list in place at the time of this rulemaking such that sources may use the map and list as a guide for understanding the applicability of requirements.

The Commission defined “midstream segment,” “natural gas processing segment,” “natural gas transmission and storage segment,” and “oil and natural gas compression segment” in this regulation to be consistent with definitions in other regulations, including Regulation Number 7, Part D, Section IV. and Regulation Number 22, Part B, Sections III. and IV.

Air Pollution Control Equipment: Section II.B.

The Commission established updated maintenance and performance test requirements for air pollution control equipment in Section II.B. In Section II.B.2.f., the Commission set forth the weekly visual inspections required for all air pollution control equipment used to comply with Section II. In this context, the Commission intends “weekly” to mean every seven calendar days. These requirements - as they applied to air pollution control equipment controlling storage tanks - were previously located in Section II.C.1.d. of this regulation (in Section II.C.1. and II.C.3., the Commission repealed these provisions that moved to Section II.B.2.); however, to ensure requirements for air pollution control equipment were in one location, the Commission has repealed the provisions of Section II.C.1.d. that are now found in Section II.B.2.f. The Commission does not intend that there is any period of time where air pollution control equipment is not subject to either Section II.C.1.d. or II.B.2.f.

Section II.B.2.g. requires owners and operators to install and operate a flow meter at the inlet to enclosed combustion equipment (or a bank of enclosed combustion devices) used as air pollution control equipment covered by this section, with some exceptions. A flow meter is a device that measures the amount of gas entering the enclosed combustion device and can be used to help determine whether an enclosed combustion device is functioning properly. The Commission believes that flow meters are an important tool to help the Division ensure that air pollution control equipment achieves at least 95% control efficiency for hydrocarbons, comparing flow rates against the high end flow limitations of the enclosed combustion device used to ensure that the enclosed combustion device is being operated within the design parameters. In Section II.B.3.g.(iii)(C), the Commission recognizes that the use of flow meters may not always be feasible; for example, flow meters can be less effective where the control device is a “low flow” device - i.e. where the flow to the device is not consistent or high enough to achieve generally accurate readings from the meter. The Commission encourages operators to provide alternative mechanisms for tracking flow data (or other Division-approved parameter) to air pollution control equipment for those situations in which flow meters are less effective or accurate. Where an operator has submitted a plan for the use of an alternate parameter under Section II.B.2.g.(iii)(C), the Commission directs the Division to promptly review and approve or deny appropriate alternative monitoring mechanisms or parameters to ensure operators may meet the applicable deadlines in Section II.B.2. However, the burden remains on the operator to comply with the regulation or, where approved, the provisions of the alternative approval. The Commission intends that if the flow meter is not connected to automation to continuously record flow, it should be capable of storing at least two weeks of data.

In Section II.B.2.h., the Commission established performance testing requirements for enclosed combustion devices. Truly voluntary control equipment is not subject to these provisions. Historically, the Commission has assumed that enclosed combustion devices were achieving at least 95% control efficiency for hydrocarbons. However, the Commission determined that it was appropriate to promulgate regulatory requirements that will additionally ensure that enclosed combustion devices in the state are, in fact, operating at and achieving 95% control efficiency for hydrocarbons emitted from equipment controlled in accordance with requirements in Regulation Number 7, Part D, Sections I.D., II.C.1., II.D., or II.F. (Note: this requirement is not intended to include performance testing for combustion of pilot light gas only.) In Section II.B.2.h.(i)(H), the Commission does not require retesting if an enclosed combustion device is replaced with a newly manufactured enclosed combustion device. However, the Commission intends that this apply only where the issue causing the failing test would be addressed by replacement of the device itself, and the failing test was not due to some other cause.

Section II.B.2.h.(ii)(A) contains a table that sets forth the schedule for the initial testing of enclosed combustion devices that commenced operation before December 31, 2021 (unless the Division approves an alternative testing schedule). The Commission prioritized the testing of enclosed combustion devices in disproportionately impacted communities and, after that, devices in the 8-hour Ozone Control Area/northern Weld County.

Some stakeholders wanted the Commission to formally adopt these requirements as part of expanding the nonattainment area boundary for the 2015 ozone NAAQS; however, at the time of the proposal for this regulation, the state was still waiting on final action from the U.S. EPA, and such a change must be accomplished in the SIP, not in Section II. of Regulation Number 7, Part D, which contains state-only requirements.

The Commission strongly encourages owners and operators to prioritize the testing of the enclosed combustion devices at the biggest sites and the oldest enclosed combustion devices. The Commission believes that underperforming, older enclosed combustion devices at large sites could be responsible for a larger portion of uncontrolled emissions and, therefore, such devices should be identified sooner rather than later in order to more effectively limit the amount of uncontrolled emissions. In addition, the Commission believes that, due to their age, older enclosed combustion devices are more likely to malfunction and, therefore, underperform than newer enclosed combustion devices. Thus, the Commission believes that a greater amount of uncontrolled emissions could be avoided by prioritizing the testing, and corresponding improvement in performance, of higher capacity or older enclosed combustion devices, especially those in disproportionately impacted communities. However, the Commission also recognizes that older enclosed combustion devices may not have been manufactured or installed with appropriate ports for traditional stack test methods, which will affect timing for performance testing where modifications to existing equipment must first be made. Such considerations should be included as operators develop schedules to perform required testing.

With regard to the testing schedule and other testing deadlines set forth in Section II.B.2.h.(ii) (see, for example, Section II.B.2.h.(ii)(C)), an enclosed combustion device that is relocated by an owner or operator to another facility that is also controlled by that same owner or operator may maintain the same testing schedule as if it had not been relocated.

Section II.B.2.h.(iii) provides that owners or operators of enclosed combustion devices subject to Section II.B.2.h.(ii) must submit a notification to the Division with certain specified information no later than July 31, 2022. Such notification must be submitted in writing and may be amended as long as the testing schedule set forth in Section II.B.2.h.(ii) is met. Section II.B.2.h.(iii)(A) identifies some of the specific information that must be included in the notification, including the location of the enclosed combustion device. When providing the location of the enclosed combustion device in a written notification, the owner or operator must also state whether or not the enclosed combustion device is located within a disproportionately impacted community and/or the 8-hour Ozone Control Area/northern Weld County.

The Commission has determined that performance tests must be conducted pursuant to a Division-approved protocol. The Commission intends that as an alternative to a site-specific protocol, operators may submit to the Division a company-specific protocol for approval for that company's different types of site configurations, to which an operator would certify that it followed for each performance test conducted pursuant to that protocol. The Commission also anticipates that the U.S. EPA will be releasing a protocol for an outlet-only testing method and directs the Division to consider publishing that protocol on its website as a pre-approved test protocol for enclosed combustion device performance testing, to which operators would certify they followed in conducting a performance test. The Division may also develop a statewide protocol that may be followed by any owner or operator. If utilizing the Division's statewide protocol, an owner or operator need only provide a notice prior to conducting testing pursuant to the protocol. The Commission also directs the Division to consider approving different protocols for different types of devices. For example, the Commission would support a different test protocol for devices operating at such low-flow that supplementing the gas stream to the device would be required for purposes of the test. Given the evolving and innovative work and study in this area to evaluate the performance of enclosed combustion devices, the Commission recognizes that protocols may be developed, subject to Division approval, that don't result in a strictly numeric destruction efficiency evaluation, such as a traditional stack test, and those may be approvable protocols, in which case, the protocol will identify the metric by which the testing will be considered passing or failing.

The Commission understands that development of performance testing protocols is important to meeting the performance testing deadlines and directs the Division to develop, by August 1, 2022, a standard protocol framework for performance testing to allow operators to meet the required testing timelines, and by October 31, 2022, an alternative protocol to a traditional stack test for low-flow ECDs where appropriate. The Commission further directs the Division to review proposed companywide performance testing protocols within six months of receipt of the proposal or, where approval or denial cannot be accomplished in that time frame and where the protocol was submitted with adequate time to implement testing after Division approval, to consider approving alternative testing schedules. However, the inability of the Division to develop standard protocols or to approve a performance test protocol within the time frames provided does not relieve the operator of the duty to comply with this regulation.

Performance testing requirements under Regulation Number 7 do not limit the division's authority to otherwise require performance tests under Common Provisions, Section II.C. including those required as the outcome of approving a construction permit.

Section II.B.2.h.(i)(D) sets forth requirements for flow meter installation for each enclosed combustion device subject to Section II.B.2.h. Flow meters are necessary for certain performance test methodologies, specifically for inlet and outlet testing protocols. Therefore, while permanent flow meters are required for individual or banks of enclosed combustion devices under Section II.B.2.g., a temporary or permanent flow meter must be installed for the time period of performance testing on each individual enclosed combustion device. Where the Division approves an alternate protocol or methodology that doesn't require a flow meter for accurate determination of control efficiency, owners or operators will not need to install a flow meter in accordance with this requirement.

In Section II.B.2.h.(i)(E), the Commission explained how operators should use the results of the performance test in calculating emissions for purposes of the annual emissions inventory reporting under Sections II.G and V. If a performance test is conducted on June 1, the enclosed combustion device fails the test, a retest is conducted on July 1, and the enclosed combustion device passes the retest, the operator should use the results of the failing performance test for emission calculations from January 1 through June 30, and may use the results of the passing performance test from July 1 through December 31 of that year.

In Sections II.B.2.i and II.B.2.j., the Commission established recordkeeping and reporting requirements. The Commission deferred most of the reporting to the annual emission reports in Section V, but did require some additional reporting. When an enclosed combustion device fails its performance test, the Commission believes it is critical that the Division be made aware as soon as possible, and so has required notification be provided within thirty (30) days of a failing test. The Commission intends that for reporting under Section II.B.2.j.(i), owners or operators will submit with the notice of the failing test the monthly emissions of methane and VOC and monthly throughput (production or throughput of either natural gas or oil to the equipment being controlled) back to the beginning of the calendar year of the failed test. The Commission intends that operators will still comply with the Division's Compliance Test Protocol.

The Commission directs the Division to gather additional information about ECDs to better understand the life cycle of the devices. For example: the degradation of the devices over time, appropriate testing schedules, efficiency over time, and characteristics of the failure rate. The Commission also requests that the Division report back to the Commission with this information within 24 months.

Rod packing at natural gas processing plants: Section II.B.3.

In 2014, the Commission recognized that rod-packing replacement is an effective, and cost-effective, method for reducing emissions from this equipment - both VOC and other hydrocarbons. However, the Commission's 2014 action applied only to reciprocating compressors at compressor stations, and not gas plants. In 2017, the Commission adopted rod-packing replacement requirements for compressors at gas plants in the 8-hour Ozone Control Area. In this rulemaking, in Section II.B.3., the Commission expands rod packing replacement requirements to natural gas processing plants statewide except where the reciprocating compressor is subject to the rod packing requirements of New Source Performance Standard (NSPS) OOOO or NSPS OOOOa. Under these revisions, beginning upon the effective date, anticipated for February 14, 2022, operators will need to track hours of operation for purposes of compliance.

Owners or operators are required to change reciprocating compressor rod packing on or before 26,000 hours of operation. Owners or operators may elect to change the rod packing every 36 months instead of monitoring compressor operating hours. However, the owner or operator must begin measuring hours or months on February 14, 2022, and then change the rod packing on the applicable schedule of the parameter the owner or operator elects to measure. While this provision builds upon current reciprocating compressor rod packing requirements where this schedule was understood, the Commission now clarifies that owners or operators must utilize one measurement parameter per rod packing replacement cycle.

In Section II.B.3.c., the Commission clarified that the rod packing requirements adopted in 2014 did not apply where the compressor was subject to the reciprocating compressor requirements of NSPS OOOO. The revision to specifically identify the rod packing requirements was not a change to the meaning of the provision.

Leak Detection and Repair: Sections II.E. and II.I.

Section II.E. of Regulation Number 7 establishes additional requirements under the leak detection and repair (LDAR) program for well production facilities and natural gas compressor stations. In 2014, 2017, and 2019, the Commission established LDAR inspection frequencies to identify leaking components and require repairs in a timely fashion to eliminate excess emissions. LDAR inspection frequencies are typically based on the rolling twelve-month tons per year fugitive VOC emission rates of well production facilities and compressor stations and their location.

In 2019, the Commission adopted more stringent inspection and repair requirements for well production facilities in proximity to an occupied area. In this rulemaking action, the Commission increased the frequency of inspections at compressor stations and well production facilities statewide, in proximity to occupied areas, and in disproportionately impacted communities (see map for the specific communities in which these requirements apply). The Commission has determined that faster repair schedules and additional monitoring is required to protect public health and the environment within these disproportionately impacted communities.

In Section II.E.4.f., the Commission has set a static frequency of AIMM inspections for newly constructed well production facilities - regardless of emissions. That is, any newly constructed well production facility will have a monthly AIMM inspection frequency. The Commission also increased inspection frequencies for most well production facilities with emissions below 50 tpy (or below 20 tpy for tankless facilities) and created a new Table 5 which will inform required LDAR frequencies beginning January 1, 2023. The new table includes increased inspection frequencies at well production facilities in disproportionately impacted communities and within 1,000 feet of occupied areas.

The Commission does want to encourage the use of alternative design techniques and technologies, rather than just the traditional infrared (IR) camera. Technological advances in leak detection can outpace regulations. The Commission expects that many new technologies can be approved through the Division's existing alternative AIMM review process. The Commission does note, however, that some alternative AIMM may be appropriate for statewide inspection requirements, but not to supersede SIP inspection requirements (e.g., requirements of Regulation Number 7, Part D, Section I.L.). The Commission encourages the Division to consider, where appropriate, approving technologies as alternative AIMM for purposes of this Section II.E. even where the technology may not be approvable as alternative AIMM for Section I.L. The Commission also requests that the Division work with stakeholders and parties to this rule in 2022 to consider the opportunities to employ advanced screening and/or continuous monitoring as alternative AIMM.

The Commission has also recognized two scenarios where well production facilities need not conduct AIMM inspections in accordance with the newly increased frequencies. These scenarios include: 1) where the operator installs and uses systems to continuously monitor and adjust pressures in the storage tanks to prevent venting and to ensure lit pilot lights and 2) where the operator constructs a tankless well production facility (i.e., no hydrocarbon liquid storage tanks except for a maintenance or surge tank) with automation to provide operational feedback, non-emitting pneumatic devices, and without gas-fired engines for compression or primary power generation. For the first scenario, the Commission directs the Division to issue a protocol for the use of these automated systems, based on the Division's work in evaluating closed loop vapor control systems. In the second scenario, AIMM inspections must be completed on a semi-annual basis. For both scenarios, if an operator were to cease using any of these scenarios, the facility would immediately revert to a monthly AIMM schedule or schedule based upon Table 5, as applicable.

In Section II.I., the Commission determined that natural gas processing plants state-wide must now have LDAR programs consistent with NSPS OOOO or OOOOa, rather than just the gas plants in the 8-hour Ozone Control Area.

In Sections II.E.7.a.(iv) and II.I.1.b., the Commission considered requirements for leaking equipment and components that are placed on delay of repair and, specifically, required operators to mitigate emissions from leaking components on delay of repair and document the efforts. At natural gas processing plants, the Commission would like to encourage operators to consider drill and tap as a method of fixing component leaks while reducing equipment blowdowns, where feasible. The Commission also understands that low-e valves are cost effective and beneficial in reducing fugitive emissions from components and recommends that operators consider low-e valves as they replace and repair leaking equipment and construct new facilities.

Separator Control Requirements: Section II.F.

Section II.F. had previously required capture or control of hydrocarbon emissions from separation equipment for a well-constructed, fracked, or recompleted after 2014. In this revision, the Commission required the capture or control of hydrocarbon emissions from all separation equipment, regardless of construction date. This is consistent with the recent Colorado Oil and Gas Conservation Commission (COGCC) mission change rulemaking, which essentially requires capture and prohibits the venting or even flaring of gas from the separation equipment unless a variance is obtained from the COGCC. Where the COGCC determines that a variance for venting (as that term is defined by the COGCC) is appropriate, that operation is exempt from Section II.F.2. of the Commission's regulation (though not from Section II.F.1. or other applicable provisions, such as Regulation Number 3 reporting and permitting or Regulation Number 7, Part D, Section V. annual emission reporting).

Further, Section II.F. was revised to clarify that all control equipment controlling separators is subject to Section II.B.2. requirements (separators subject to Section II.F. were already subject to Section II.B.1.).

Well Maintenance Requirements: Section II.G.

Certain activities - such as well liquids unloading, well maintenance events, and well plugging - can result in emissions to the atmosphere. The Commission has long required that operators use best management practices to reduce the need to emit during these activities, and to reduce the amount of gas emitted during these activities. However, the Commission has determined that it is necessary to specify some of the practices that must be employed. Section II.G.1.c. therefore identifies several best management practices that operators must use to reduce the need for emissions from all these activities. For example, the Commission intends that in constructing a new well production facility, operators must consider how to reduce the need for well liquids unloading or well maintenance over the life of the well, and design accordingly. As another example, the use of an artificial lift, such as a plunger lift, can both reduce the need to emit during well liquids unloading and reduce the volume of gas emitted during a manual liquids unloading event.

The Commission also recognizes that well unloading occurs to remove liquid build-up to restore productivity. When attempting to relieve atmospheric pressure through emitting to the atmosphere to remove liquid buildup in these wells, particularly when the emissions occur multiple times each year over the life of a well, there can be significant hydrocarbon emissions. The Commission considers well swabbing to be a well liquids unloading event. Technology and practices have advanced such that it is possible to use equipment - including equipment more typically considered process equipment - to reduce the need to emit during well liquids unloading. The Commission has established thresholds at which well liquids unloading activities must be controlled. These capture or control requirements apply as of January 1, 2023; however, the Commission does not intend that the "counting" of unloads will begin on January 1, 2023. Instead, for determining whether control is required as of January 1, 2023, the operator must look back over the preceding 12 months - i.e. calendar year 2022 - to consider if any of the thresholds are met.

The regulation speaks to well production facilities that "have" wells with specified numbers of unloading events. The regulation includes all wells producing into that well production facility - the wellhead itself need not be physically located within the boundaries of the well production facility. Most of the thresholds speak to well production facilities where operators conduct a specified number of unloading events - unless explicitly otherwise stated, the Commission intends this to account for unloading events from all wells producing into that facility. For example, under Section II.G.1.d.(ii)(A), capture or control is required if the number of unloading events at the well production facility totals six or more; at a well production facility with 3 wells, this threshold is reached where each well is unloaded to the atmosphere twice in that six-month period.

The Commission's existing regulation in Section II.G.2.b. requires operators to maintain, among other things, the date, time, and duration of unloading events resulting in emissions to the atmosphere. The Commission intends that the failure to keep required records leads to a presumption that control would have been required for such events.

The Commission understands that, infrequently, a nearby hydraulic fracturing event (i.e., an "offset frac") can cause a well to fill up with water, necessitating the unloading of that well to remove the water. The Commission believes that such unloading events - so long as they are limited in scope and duration - should not be counted toward the applicability thresholds of this rule, which is directed at wells that can be expected to have routine or predictable unloading operations (with emissions to atmosphere). The timing of the notice of the offset frac in Section II.G.1.d.(iii) is intended to be consistent with the COGCC rule addressing the same notification. The Commission intends that if the Division later determines the claim of offset frac was not valid for a particular event or series of events, the operator bears the risk of not having employed capture or control techniques. Further, the Commission emphasizes that it expects this to be a "limited-use" exemption, subject to removal from the rule if overused.

For recordkeeping and reporting purposes, the Commission intends that operators directly measure the volume of gas emitted during liquids unloading events and report that information to the Division annually. The Commission included this measurement and reporting requirement due to the uncertainty regarding the reliability of estimated volumes reported to EPA under GHGRP and reported to the Division under Regulation Number 7 annual emission reporting. However, the Commission encourages the Division to work with operators on using direct measurement of volumes vented during unloading to, as appropriate, develop updated calculation methodologies or emission factors to use in reporting emissions from well liquids unloading.

Pigging and Blowdown Requirements: Section II.H.

The Commission was presented with data reported to EPA and to the Division that generally agrees that the largest sources of greenhouse gas emissions from the midstream segment is the fuel combustion equipment; however, these data sets also agree that emissions (particularly methane emissions) from operations and maintenance activities - such as pigging and blowdowns - are significant, and, the Commission has determined they are cost-effective to address.

The Commission recognizes that depressurizing pig launchers and receivers or blowing down compressors and other equipment in natural gas gathering operations can emit VOCs. Emissions associated with the removal of oxygen from equipment to place equipment into service after a blowdown are not subject to Section II.H. in order to safely operate the equipment. This gas released from pigging and blowdown activities is under the same pressure as the pipeline and contains methane, ethane, and VOCs including benzene, toluene, ethylbenzene, and xylene. Pig receivers can also contain collected condensate liquid that had accumulated in the pipeline.

The Commission mandated that owners or operators capture and recover gas from pigging and blowdown activities, and if not possible, to request Division approval to install and operate air pollution control equipment, such as vapor recovery, flare/combustors, or a Division-approved alternative to achieve a 95% reduction in hydrocarbon emissions. The Commission has a strong preference for capture and recovery established in this regulation, but does allow for control or use of a closed vent system. The Commission intends that the reference to closed vent system here is consistent with the requirements of Part D, Section I. and NSPS OOOOa, 40 CFR 60.481a.

The Commission adopted requirements to require capture or control of emissions from pigging operations in all cases where the pigging unit is attached to a pigging pipeline with an outside diameter of 12 inches or more and with a normal operating pressure greater than or equal to 500 psig. The Commission defined normal operating pressure by reference to the annual average operating pressure. However, if an operator makes an engineering adjustment to the pigging pipeline that lowers the operating pressure to below the 500 psig threshold (assuming that this engineering adjustment is not truly temporary in nature), the Commission does not intend that the operator has to wait a year for the annual average operating pressure to drop before falling out of applicability. Additional requirements to capture or control are dependent on emission thresholds of both VOC and methane, and the thresholds are the most stringent in disproportionately impacted communities. The Commission included thresholds for both constituents because of the difference in gas composition between the front range and the rest of the state. The Commission is establishing the specific thresholds and performance standards on pigging units and blowdowns in the midstream sector based on specific operational and emissions data associated with the midstream segment in Colorado.

Further, the Commission is requiring capture or control of emissions from pigging operations that commence operation after the effective date of this rule, where the pigging unit is attached to a high-pressure pipeline (regardless of diameter) and at certain specified emission thresholds. In addition, to encourage innovative engineering of and practices at future natural gas compressor stations, natural gas processing plants, and standalone pigging stations, the Commission adopted Section II.H.1.d., which requires an operator to analyze and implement engineering technologies and capabilities and operational practices that maximize the capture and recovery of hydrocarbon emissions from pigging operations and other equipment and piping that are routinely blown down. The Commission intends that this analysis be undertaken at the time of initial facility design and development. Similarly, to minimize emissions associated with the equipment necessary to power the capture and control equipment, the Commission adopted Section II.H.3.e. This section provides that where a natural gas compressor station or natural gas processing plant is connected to the electrical grid, the operator should use that electric grid as the source of power for the equipment required for capture and recovery techniques, where technically and economically feasible.

The Commission intends that this analysis be undertaken at the time the pigging unit or piping and equipment must comply with Section II.H., whether by January 1, 2023, or sometime after that initial compliance date. For example, if an operator adds a pigging unit in 2024, and the operator intends to use gas recovery equipment to capture the emissions, the operator must conduct an evaluation of whether it is technically and economically feasible to power that gas recovery equipment through grid power. In order to demonstrate compliance with Sections II.H.1.d. and II.H.3.e., the operator must retain the record of that determination and the basis therefor. Under both these provisions, it is not the Commission's intent that the Division second-guess the reasonable engineering, design, and business judgment of the operator. The Commission recognizes that these analyses may contain confidential business information.

In Sections II.H.1.a.(iii) and II.H.1.a.(iv), the Commission understands that capturing or controlling emissions from small blowdown events, either from compressors or other equipment, is often cost prohibitive (when looked at on a per-blowdown or per-equipment basis) and may result in more emissions from the capture and control efforts than what is reduced based upon the fuel source for the capture or recovery equipment. Therefore, the Commission has included that blowdown events from compressors or equipment, where between isolation valves the total volume is less than 50 cubic feet, do not need to be included in emission calculations toward the thresholds nor do they need to be captured or controlled. However, the Commission feels it is important to better understand the frequency and number of such events. If an owner or operator is found not to be keeping the required records relating to blowdown events greater than 1 cubic foot and under 50 cubic feet, the regulatory presumption is that capture or control was required for equipment blowdown events, and noncompliance is not a simple recordkeeping violation.

Further, in Sections II.H.1.c.(vii) and II.H.1.c.(viii), the Commission provided that when a source previously not subject to capture or control has emissions that meet or exceed the applicability thresholds, that source will have sixty (60) days from the first day of the month after meeting/exceeding the thresholds to comply with the capture or control requirements. The Commission believes that operators should be tracking emissions such that they can generally predict when a source will exceed thresholds and should prepare accordingly. However, the Commission understands that sometimes unforeseeable events will cause an emissions increase. Under such circumstances, the Commission encourages operators to reach out to the Division prior to missing a compliance deadline, and directs the Division to work with those operators to ensure capture and recovery begins as soon as practicable, which may be more than 60 days.

The Commission also provided, in Sections II.H.3.e and II.H.3.f, that capture and recovery is not always required. Capture and recovery is only required during normal operations - i.e. not during malfunctions. And capture and recovery is not required during emergency shutdown systems testing, such as would be required under OSHA's Process Safety Management standard. Further, in Section II.H.3.g, the Commission provided that capture or recovery is not required on certain vessels; however, uncontrolled actual emissions from blowdowns of these vessels (if greater than 50 cf) must be included in the calculations for purposes of the general applicability of control requirements. Operators must look at uncontrolled actual emissions from blowdowns - if a piece of equipment is blown down and the emissions are controlled, the uncontrolled actual emissions from that blowdown event still count toward the applicability threshold. The Commission does not intend that its requirements for capture and control place operators in a situation to choose between compliance with this program and compliance with federal regulatory programs for leak detection. Thus, to the extent there are limited situations where an operator cannot reasonably capture or control the blowdown emissions necessary to fix a leak within the timelines required by federal programs, and under those same federal programs would be prohibited from placing that leak on delay of repair, operators must keep records of these events, and include information about these events on the annual emission reports submitted pursuant to Section V. Under these limited circumstances, compliance with the federal rules will generally not be deemed non-compliance with Section II.H. The Commission further directs the Division to consider whether future revisions to this program are necessary to address this type of conflict or others that may arise in the implementation.

The Commission, in addition to the capture and control requirements for pigging and blowdowns, also requires the use of certain best practices to reduce either the need or frequency of pigging and blowdown events or reduce the emissions from those activities. The Commission understands that not all best practices are viable for every location, however, and so in Section II.H.4.c., the Commission requires certain best practices to be used unless not feasible. For economic feasibility, operators bear the burden of demonstrating to the Division, upon request, that a particular decision not to use this best practice was not economically feasible, including providing specifics as to the costs used in the evaluation. Such costs do not appropriately include all indirect costs, such as internal overhead or administrative costs.

The Commission mandated recordkeeping and reporting requirements in Sections II.H.6. and V. applicable to pigging operations and blowdown activities to ensure compliance with and to track the efficacy of the established emission reduction measures. Emissions from pigging and blowdowns must be separately included in Regulation Number 7, Part D, Section V. annual reports. The records for pigging activities must include the total number of pigging events, even if not subject to capture or control.

The records must outline the location, date, time, and duration of the blowdown emissions, including records of the date, location, and equipment for which there are blowdown events where the volume between isolation valves is less than 50 cubic feet (but greater than 1 cubic foot for piping and equipment). Where Section II.H.5.b.(i) requires recordkeeping of the pressure of the pigging unit before and after capture and recovery (if applicable) and immediately before emissions to the atmosphere, the Commission is seeking information regarding the volume of gas emitted. Therefore, where capture and recovery techniques are employed, the Commission is seeking the starting pressure of the pigging unit prior to capture and recovery and the pressure of the pigging unit after capture and recovery but before the emission of the residual gas. As an example, if the pigging unit is at 900 psig before sending the gas to a low-pressure line by jumper line and at 50 psig where the remaining residual volume of gas is emitted to atmosphere, the operator would report a starting pressure of 900 psig and an ending pressure of 50 psig. Then, the emissions from the release to atmosphere of the remaining 50 psig down to 0 psig would be recorded as actual emissions as required by Sections II.H.5.b.(ii) and V. Where no capture and recovery techniques are employed, the Commission understands that the ending pressure will always be 0 psig.

The Commission also updated Sections II.C.2.a. and III.C. to reflect that the "operate without venting" mandate, and associated recordkeeping, applies during pigging and blowdown activities where reductions are required. The venting from storage tanks resulting from these operations and maintenance activities at midstream operations are no longer automatically assumed to be appropriate or necessary.

Pneumatic Controller Revisions: Section III.

The Commission also expanded the applicability of natural gas-fired pneumatic controller requirements and inspection and enhanced response requirements state-wide to natural gas processing plants. The Commission's proposal would require new gas plants to install, and existing gas plants to retrofit natural gas driven controllers with non-emitting pneumatic controllers, unless certain safety exemptions are met. The Commission's proposal also requires that any remaining gas-driven controllers be subject to the find and fix program.

In Section III.C.3.a., the Commission clarified a revision made in February 2021. In February, the Commission revised this section to add an end-date of May 1, 2021, given the new requirements in III.C.4. However, the requirements of Section III.C.4. do not apply as widely as Section III.C.3.a., so the Commission here clarified that Section III.C.3.a. continues to apply unless a specific provision of Section III.C.4. is controlling (i.e., under the principle that the more specific controls over the general, in the event of a conflict between Section III.C.3.a. and III.C.4., Section III.C.4. would control).

In Section III.F., the Commission aligned the inspection schedules for natural gas-driven pneumatic controllers with the revised inspection schedules for components in Section II.E.

Annual Emissions Reporting: Section V.

The Commission made several updates to Section V., some for clarification and some to better ensure the accuracy and verifiability of the annual emissions reports. In Sections V.B.1.e. through V.B.1.g., the Commission clarified that operators must use Division-approved calculation methods. The Commission considers this a clarification of the program adopted in 2019, which required operators to use the Division-approved form. The Commission adopted this clarification to ensure that operators are aware of the duty to recalculate and resubmit their annual emissions reports if the Division disapproves of a calculation methodology (if, for example, the methodology was not approved ahead of the report's submission).

In Section V.B.1.h., the Commission expressly required that operators who submit emissions information using a calculation methodology different from that used to submit the annual greenhouse gas reports to the U.S. EPA under the Greenhouse Gas Reporting Program also submit to the Division: 1) the emissions information using the same calculation method as used in the GHGRP program; and 2) a justification for the change in calculation methodology. The Commission recognizes that some equipment is reported to EPA in the aggregate, while reported individually to the Division. The Commission intends that the operator provide sufficient information to enable the Division and the public to understand the differences in an operator's calculation methods; the Commission does not hereby require that operators educate the Division or the public on the differences between the federal and state reporting programs. The Commission believes that flexibility in calculation methodology is an important tool to ensure more accuracy across operations; however, it is necessary to understand deviations from EPA's approved methodology to ensure appropriate comparisons and to provide transparency. The Commission has also recognized again the Division's authority to require recalculation of emissions data if the alternative calculation methodology is not deemed approvable by the Division.

In Section V.B.1.j., the Commission has required that operators using emission factors to calculate emissions must either use Division-approved emission factors or may use a site-specific emission factor. However, the Commission recognizes that gas composition may change over time, and therefore has determined to require periodic gas composition analysis to support the continued use of site-specific emission factors. The Commission expects that the Division will, as appropriate, update any default factors based upon collected gas composition data. The Commission directs the Division to work with operators to conduct representative sampling, where appropriate. The Commission has set the frequency for sampling at five years, which aligns with APEN update frequencies. The Commission does not intend that operators can wait five years to conduct their first gas composition analysis; in adopting a schedule that aligns with APEN updates, the Commission intends to generally align the sampling schedule with APEN updates.

In Section V.C.2., the Commission clarified the type of information that must be submitted. The requirements adopted in 2019 specified that operators must submit information including the emissions, emission factors, assumptions, and calculation methodology. And Section V.B.1.c. required submission of information about the activities and equipment covered by the report. The Commission now clarifies that other information the Division deems necessary to support the emissions reported must be included, to avoid operator reluctance to share this information based upon the previous regulatory language.

In Section V.C.2.d., beginning with the June 2024 report for calendar year 2023, the Commission requires owners or operators to report emissions, along with other supporting information, resulting from blowdowns from facility equipment and piping where the physical volume of the piping between isolation valves is greater than or equal to 1 cubic foot. The Commission notes its interpretation that the 50 cubic foot exemption adopted in 2019 never applied to blowdowns of pipeline segments between facilities that were previously reported under Section V.C.2.s. (now Section V.C.2.t.). The Commission has also rearranged the requirement to report emissions and other supporting information for pigging operations such that it no longer falls under Section V.C.2.d. and now stands alone under Section V.C.2.s. The allowance to exclude blowdowns from facility equipment and piping as well as from pigging operations where the physical volume of the piping between isolation valves is less than or equal to 50 cubic feet continues through the June 2023 report for the 2022 calendar year. The Commission understands that accurate tracking of gas volumes from equipment and piping where the physical volume of the piping between isolation valves is greater than or equal to 1 cubic foot can be difficult. Therefore, the Commission directs the Division to accept appropriate actual and approximated reported volumes for this subcategory of blowdowns. For the revised exemption of blowdowns where the physical volume is less than 1 cubic foot, the Commission requires operators to maintain a list of the equipment and blowdown activities that have volumes less than 1 cubic foot so that the Division can maintain oversight of those blowdowns and revisit the availability of this more limited exemption as appropriate.

In Section V.C.2.k., the Commission specified that operators must report component counts and gas speciation data used to support fugitive emission calculations. The Commission acknowledges that component counts can be representative, and are not necessarily specific counts per facility. However, where operators are using representative component counts, that must be noted on the submittal.

The Commission made other clarifications and updates, and included the date of both reporting year and year of report submittal where necessary to ensure that operators have adequate time to capture any new information.

Annual Information Reporting: Section V.D.

In 2020, the Colorado Oil and Gas Conservation Commission adopted COGCC Rule 904(a), which was designed to facilitate information sharing between the COGCC and CDPHE. COGCC Rule 904(a) mandates an annual report by the COGCC Director to the COGCC, and expresses an intent that the COGCC Director collaborate with the Division to include certain specified information. Stakeholders requested that this Commission adopt a counterpart to that rule, to ensure that the information necessary to that COGCC Rule 904 report is timely provided. The Commission agrees and has adopted Section V.D. to facilitate that information sharing by the Division. The Commission has specified that several annual reports already required to be presented to this Commission will be provided thereafter to the COGCC, including the annual ozone report and the annual GHG Roadmap progress report (and the more formal biennial GHG Roadmap inventory update and progress report).

The Commission encourages meaningful and frequent collaboration between the Division and the COGCC, to ensure that the state can meet its air quality goals, including reducing greenhouse gas emissions, striving towards ozone attainment, and reducing “cumulative impacts” of oil and gas development. The Commission anticipates the agencies sharing information regarding evolving or new innovative technologies or measures that may provide innovative methods to reduce emissions; identifying areas for further study; and annual reporting to both this Commission and the COGCC will ensure that collaboration is ongoing and effective.

Miscellaneous

In Section II.B.2. and II.B.3., the Commission updated the section regarding requirements for compressors (reciprocating and centrifugal) to reflect that compliance with either NSPS OOOO or NSPS OOOOa is sufficient. The revisions made to Regulation Number 7 also renumber tables and provisions to accommodate the new requirements, and correct typographical, grammatical, and formatting errors. The Commission directs the Division to consider extending the schedule for the company-wide non-emitting controller program, and to consider additional requirements to retrofit pneumatic controllers at sites not currently subject to retrofit pursuant to Section III.C.4.c.(iv), coincident with the oil and gas section rulemaking planned for the first half of 2023.

Incorporation by Reference

The Commission will update regulatory references as needed as opportunities arrive.

Additional Considerations

The following are additional findings of the Commission made in accordance with the Act:

As some of these revisions exceed and may differ from the federal rules under the federal act, in accordance with § 25-7-110.5(5)(b), C.R.S., the Commission determines:

- (I) Any federal requirements that are applicable to this situation with a commentary on those requirements;

There are existing federal regulations that seek to identify and reduce methane emissions from the oil and gas industry, such as the Greenhouse Gas Reporting Program (Part 98) and NSPS KKK, OOOO, and OOOOa. The EPA will soon release additional proposals to address greenhouse gas emissions from oil and gas equipment, but EPA's proposal will not address the particular situations addressed by the Commission's revisions here. CAA Sections 172(c) and 182(b) require that Colorado submit a SIP that includes provisions requiring the implementation of RACT at sources covered by a CTG. The EPA issued the final Oil and Gas CTG in October 2016, leading to the revisions to the Ozone SIP adopted by the Commission in 2017. The revisions adopted by the Commission in this rulemaking strengthen the previously adopted requirements and are comparable to the Oil and Gas CTG's recommendations.

Under Regulation Number 7, Part D, Section I.G., natural gas processing plants in the 8-hour Ozone Control Area must comply with the LDAR program in NSPS OOOO or NSPS OOOOa. Natural gas processing plants outside the 8-hour Ozone Control Area may also be subject to NSPS OOOO or NSPS OOOOa, depending on the date of construction. In these revisions, the Commission subjected gas plants statewide to requirements that had previously only applied within the 8-hour Ozone Control Area. EPA also has regulations and guidance for compressors (e.g., rod packing replacement) and pneumatic controllers. Colorado's requirements - both existing and as proposed herein - meet or exceed these federal requirements. For example, many federal requirements are applicable in ozone nonattainment areas, while Colorado's provisions apply statewide. Through Part D, as revised, the Commission builds upon established federal LDAR requirements and closes additional monitoring gaps by eliminating limits on NSPS OOOOa applicability by location for certain natural gas sources and to establish a more robust LDAR program throughout the state. EPA also asks states to consider environmental justice as part of their actions, though there are no specific federal regulatory requirements at this time. These revisions expand on environmental justice considerations by incorporating the definition of "disproportionately impacted communities" (DI Community), and seeking to prioritize reductions in DI communities.

- (II) Whether the applicable federal requirements are performance-based or technology-based and whether there is any flexibility in those requirements, and if not, why not;

The federal requirements addressing methane reductions from the oil and gas sector (though not applicable in this situation) as described are both performance-based and technology-based. Current federal requirements for methane reductions speak to achieving a control efficiency, with minimal flexibility. Some requirements also mandate the use of technology to detect methane emissions. However, EPA does provide some flexibility in the technology that can be used.

- (III) Whether the applicable federal requirements specifically address the issues that are of concern to Colorado and whether data or information that would reasonably reflect Colorado's concern and situation was considered in the federal process that established the federal requirements;

There are federal requirements that seek to reduce greenhouse gas from oil and gas operations, though none that are addressed to the specific goals of these revisions. The Commission's revisions address Colorado-specific requirements and needs, like those of HB 19-1261 and HB 21-1266, which were not considered in any federal process. The CAA establishes the 8-hour ozone NAAQS and requires Colorado to develop SIP revisions that will ensure timely attainment of the NAAQS. Neither the ozone NAAQS nor EPA's Oil and Gas CTG addressed concerns unique to Colorado.

- (IV) Whether the proposed requirement will improve the ability of the regulated community to comply in a more cost-effective way by clarifying confusing or potentially conflicting requirements (within or cross-media), increasing certainty, or preventing or reducing the need for costly retrofit to meet more stringent requirements later;

The proposed midstream and upstream requirements ensure that the regulated community can achieve required GHG emissions reductions in cost-effective ways and reduce the need for costlier retrofits later. The SIP revisions build upon the existing regulatory programs being implemented by Colorado's oil and gas industry, which is more efficient and cost-effective than a wholesale adoption of EPA's recommendations in its Oil and Gas CTG as RACT.

- (V) Whether there is a timing issue which might justify changing the time frame for implementation of federal requirements;

This is a state-specific rule that is not implementing federal requirements. Thus, no timing issue exists with respect to implementation of federal requirements. EPA is under a mandated deadline to act on Colorado's SIP revisions as related to EPA's Oil and Gas CTG and has requested that Colorado expeditiously adopt the SIP revisions included in this rulemaking in order to complete that approval action.

- (VI) Whether the proposed requirement will assist in establishing and maintaining a reasonable margin for accommodation of uncertainty and future growth;

The regulatory provisions allow a reasonable amount of time for affected entities to comply with the new revisions. As such, affected businesses or industrial sectors are afforded a reasonable margin for accommodation of uncertainty and future growth.

- (VII) Whether the proposed requirement establishes or maintains reasonable equity in the requirements for various sources;

The Commission's revisions establish and maintain reasonable equity because they subject similar sources statewide with similar emitting activities to similar requirements. Climate change is not a local problem, and these rules demonstrate that the sources everywhere must contribute to the solution.

- (VIII) Whether others would face increased costs if a more stringent rule is not enacted;

The Commission believes that the cost of inaction would be greater to industry and the public than the costs associated with the revisions to Regulation Number 7, Part D. Not only with respect to the social cost of climate change, but also more direct costs. These revisions are designed with the maximum flexibility for the regulated community. Under HB 21-1266, if the state is not on track to achieve the emission reduction goals, the Commission must adopt further regulations to achieve those goals. Future efforts are likely to be not as cost-effective as the flexible programs in these revisions.

Further, if EPA does not approve Colorado's SIP, EPA may promulgate a Federal Implementation Plan, thus potentially determining RACT for Colorado's sources and subjecting others to increased costs.

- (IX) Whether the proposed requirement includes procedural, reporting, or monitoring requirements that are different from applicable federal requirements and, if so, why and what the "compelling reason" is for different procedural, reporting, or monitoring requirements;

Reporting requirements beyond those required under federal Part 98 are necessary to effectively quantify and measure Colorado's progress toward statewide GHG reductions and to achieve the public health, safety, and welfare goals set forth in § 25-7-102, C.R.S. Many of the reporting requirements associated with these programs are in existing Commission regulations, in Regulation Number 7, Part D. However, these revisions do require some additional reporting. Under these requirements, owners and operators of these sources will be required to compile and report directly to the Division information collected by or available to them for business or other regulatory purposes. While this may overlap with some other federal reporting requirements, it is expected there will be reporting beyond what is required federally.

- (X) Whether demonstrated technology is available to comply with the proposed requirement;

Demonstrated technology exists to enable compliance with the requirements of these revisions. The Commission has also embedded maximum flexibility to take advantage of future technological developments.

- (XI) Whether the proposed requirement will contribute to the prevention of pollution or address a potential problem and represent a more cost-effective environmental gain;

These revisions will cost-effectively reduce statewide GHG emissions to meet the legislative directive of the State Air Act, as revised by SB 19-181, HB 19-1261, and HB 21-1266. As noted, the General Assembly has acknowledged that climate change impacts Colorado's economy and directed that GHG emissions should be reduced across the many sectors of our economy. Colorado has established specific GHG reduction goals within its statutes. Programs established in this rulemaking action - in both Regulation Numbers 7 and 22 - provide mechanisms for GHG reductions to occur cost-effectively across a specific, high-emitting sector of the state's economy.

- (XII) Whether an alternative rule, including a no-action alternative, would address the required standard.

The new regulatory requirements and amendments are needed to achieve the statutorily mandated emission reductions. As noted, the State Air Act requires the Commission to implement GHG emission reduction strategies in order to secure reductions of pollution consistent with the statewide GHG emission reduction goals. Currently, emissions projections over the next decade demonstrate that a no-action alternative would fall short of achieving Colorado's reduction goals.

Additionally, no alternative combination of sector-specific regulations has been identified that is sufficient to meet the state's GHG emissions reductions goals. In addition, the CAA requires that Colorado's Ozone SIP must include RACT requirements for each category of VOC sources covered by a CTG. EPA requested that Colorado strengthen associated monitoring requirements for combustion devices controlling certain equipment to further align with EPA's Oil and Gas CTG. Based on conversations with EPA, the revisions further align Colorado's Ozone SIP RACT requirements with the recommendations in EPA's Oil and Gas CTG. Alternative rules may not align with the recommendations in the Oil and Gas CTG, thereby failing to qualify as necessary SIP RACT resulting in an unapprovable SIP. Because EPA has requested these changes be made expeditiously, a no-action alternative would likely result in an unapprovable SIP. The Commission determined that the Division's proposal was reasonable.

Findings of Fact

To the extent that § 25-7-110.8, C.R.S., requirements apply to this rulemaking, and after considering all the information in the record, the Commission hereby makes the determination that:

- (I) These rules are based upon reasonably available, validated, reviewed, and sound scientific methodologies, and the Commission has considered all information submitted by interested parties.
- (II) Evidence in the record supports the finding that the rules shall result in a demonstrable reduction of greenhouse gas and VOC emissions.
- (III) Evidence in the record supports the finding that the rules shall bring about reductions in risks to human health and the environment that justify the costs to implement and comply with the rules.
- (IV) The rules are the most cost-effective alternative to achieve the necessary reduction in air pollution and provide the regulated entity flexibility.
- (V) The selected regulatory alternative will maximize the air quality benefits of regulation in the most cost-effective manner.

Y. December 17, 2021 (Removed from Regulation Number 22 and placed in Regulation Number 7 April 20, 2023)

Revisions to Regulation Number 22, Part B, Sections III. and IV.

This Statement of Basis, Specific Statutory Authority, and Purpose complies with the requirements of the State Administrative Procedure Act, § 24-4-101, C.R.S., et seq., the Colorado Air Pollution Prevention and Control Act, § 25-7-101, C.R.S., et seq., and the Air Quality Control Commission's (Commission) Procedural Rules, 5 C.C.R. §1001-1.

Basis

During the 2019 legislative session, Colorado's General Assembly adopted revisions to several Colorado Revised Statutes in Senate Bill 19-181 (SB 19-181) (Concerning additional public welfare protections regarding the conduct of oil and gas operations) that include directives for both the Oil and Gas Conservation Commission (OGCC) and this Commission. In the same session, the General Assembly adopted House Bill 19-1261 (HB 19-1261), setting statewide greenhouse gas (GHG) reduction goals. The General Assembly declared in HB 19-1261 that "climate change adversely affects Colorado's economy, air quality and public health, ecosystems, natural resources, and quality of life[.]" acknowledged that "Colorado is already experiencing harmful climate impacts[.]" and that "many of these impacts disproportionately affect" certain disadvantaged communities.

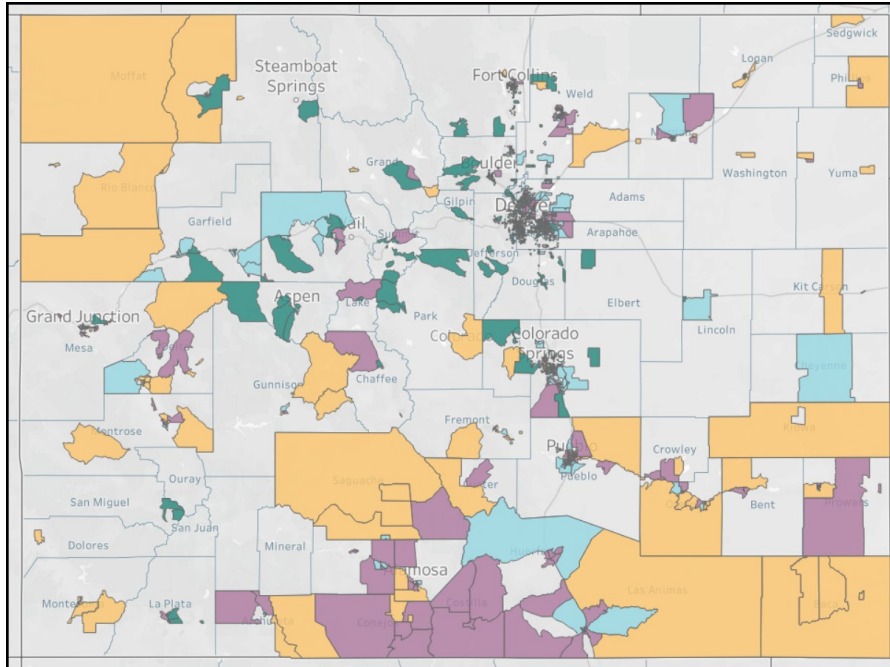
The goals set in HB 19-1261 seek a 26% reduction of statewide GHG emissions by 2025; 50% reduction by 2030; and 90% reduction by 2050 as compared to 2005 levels. The GHG Pollution Reduction Roadmap (“GHG Roadmap”) developed by the Colorado Energy Office and CDPHE identifies the largest contributors to state GHG emissions and quantifies the baselines from which these reduction percentages are to be estimated.

In October 2020, the Commission established a target for the O&G Sector of a 36% reduction from the 2005 baseline by 2025 and a 60% reduction from the 2005 baseline by 2030 (an estimated 13 million metric tons (MMT) CO₂e by 2025 and 8 MMT CO₂e by 2030). Commission targets for the sector including industrial combustion emissions (Industrial Sector) include a 20% reduction from 2015 numbers by 2030. House Bill 21-1266 (HB 21-1266), signed into law on July 2, 2021, memorializes these percentage reductions in statute, and provides additional requirements for the rulemakings to achieve these goals.

The oil and gas industry is a large source of GHG emissions, and the largest anthropogenic source of methane in Colorado. For the oil and gas industry, not all of its emissions are found in the “O&G Sector”, also referred to as the “Oil & Gas Fugitive Emissions” category of the GHG Roadmap. Most methane emissions from upstream and midstream activities, along with estimates of methane “leakage” from pipelines in the transmission & storage and distribution segments, are in the O&G Sector. In contrast, the emissions from fuel combustion at oil and gas sources in the upstream and midstream segments are largely found in the “RCI Sector” of the GHG Roadmap (specifically in the “industrial” category, which is the subject of specific requirements in HB 21-1266).

In this rulemaking action, the Commission has adopted requirements for upstream and midstream segment operations, to reduce GHG emissions from those operations, sufficient - when taken in combination with other regulatory and voluntary actions across the state - to achieve the GHG reduction requirements of HB 21-1266. In this action, the Commission did not adopt regulations applicable to the transmission and storage segment or the distribution segment. With regard to the transmission and storage segment, the Commission adopted a performance-based program for this segment in 2019 designed to materially reduce greenhouse gas emissions from transmission and storage operations; reporting of progress has not yet begun under that program and the Commission believes it reasonable to evaluate the progress of that program before modifying it. The Commission did not adopt regulations applicable to the distribution segment because legislation passed in the 2021 session invests the Colorado Public Utility Commission (PUC) with authority over this segment of the oil and gas industry. Senate Bill 21-264 (SB 21-264) requires that gas distribution utilities will submit a comprehensive clean heat plan that demonstrates projected reductions in methane and carbon dioxide emissions that meet prescribed reduction targets. Each clean heat plan must outline the utility’s proposal to reduce carbon dioxide and methane emission levels by 4% in 2025 and 22% in 2030. Gas distribution utilities, depending on their size, must submit clean heat plans to the PUC by August 1, 2023 and January 1, 2024. Thus, the Commission believes that the transmission & storage performance program and the clean heat plans are likely to achieve reductions of emissions necessary from these segments to achieve the goals of § 25-7-105(1)(e)(XII).

In the 2021 legislative session, in HB 21-1266, the General Assembly also determined that “state action to correct environmental injustice is imperative, and state policy can and should improve public health and the environment and improve the overall well-being of all communities... [and] efforts to right past wrongs and move toward environmental justice must focus on disproportionately impacted communities and the voices of their residents.” HB 21-1266 also requires the Commission to ensure additional protections for, and reductions of co-pollutants in, disproportionately impacted communities. CDPHE developed a map of the disproportionately impacted communities that meet the definition of HB 21-1266. While this map is expected to change over time, the disproportionately impacted communities that have been identified at the time of this program’s adoption are as set forth in the following map:



**Meets EJ Act DI Community
definition due to...**

- Low Income
- People of Color
- Housing Burden
- More than one category

Specific Statutory Authority

The Colorado Air Pollution Prevention and Control Act, § 25-7-101, C.R.S., et seq. (the State Air Act or the Act), specifically § 25-7-105(1), directs the Commission to promulgate such rules and regulations as are consistent with the legislative declaration set forth in § 25-7-102 and that are necessary for the proper implementation and administration of Article 7. The Act provides the Commission broad authority to regulate air pollutants, including GHG and its constituent gasses (particularly carbon dioxide, methane, and nitrous oxide).

§ 25-7-106 provides the Commission maximum flexibility in developing an effective air quality program and promulgating such combination of regulations as may be necessary or desirable to carry out that program. § 25-7-106 also authorizes the Commission to promulgate emission control regulations applicable to the entire state, specified areas or zones, or a specified class of pollution. § 25-7-106(6) further authorizes the Commission to require owners and operators of any air pollution source to monitor, record, and report information. § 25-7-109(10) directs the Commission to adopt emission control regulations to minimize emissions of methane, other hydrocarbons, VOC, and NO_x from oil and gas operations.

Pursuant to HB 21-1266, the Commission must, by January 1, 2022, adopt regulations to ensure that the state meets its greenhouse gas reduction targets for the oil and gas sector in the GHG Roadmap (36% by 2025 and 60% by 2030). The Commission must also ensure that industrial sector emissions (including those from oil and gas fuel combustion equipment) are reduced by 20% from the 2015 baseline by 2030. These revisions ensure that the state meets its statutory goals. These revisions to Regulation Number 22 will, taking into account other relevant laws and rules (including the revisions to Regulation Number 7 adopted as part of this rulemaking action), as well as voluntary actions taken by local communities and the private sector, achieve the state's GHG reduction goals through 2030 for the oil and gas industry. The revisions include protections for disproportionately impacted communities that ensure reductions of pollutants other than GHGs, additional requirements for monitoring and leak detection and repair, and improve the state's current emission inventory reporting program in Regulation Number 7, Part D.

Purpose

The following section sets forth the Commission's purpose in adopting the revisions to Regulation Number 22, and includes the technological and scientific rationale for the adoption of the revisions. The Commission recognizes that a task force on Carbon Capture, Utilization, and Storage (CCUS) has been convened as part of the GHG Roadmap implementation, with a report to the Governor due in January 2022. The Roadmap recognizes CCUS may play an important role over a longer time horizon in meeting the HB 19-1261 targets, but that uncertainties make modeling CCUS contributions difficult at this time. The Commission encourages the Division to evaluate ways to incorporate GHG emission reductions generated from CCUS projects into existing or contemplated regulatory programs such as the fuel combustion program or the GHG intensity program discussed.

Definitions: Sections III.A. and IV.A.

In Sections III.A. and IV.A., the Commission included several defined terms from Regulation Number 7 and intends that the same terms have the same meaning in both regulations unless otherwise specified (i.e., unless the regulation states that a term is defined specifically for purposes of that regulation). The Commission intends that terms used in Sections III. or IV., even if only defined in one of those Sections, have the same meaning.

The Commission defined both the midstream segment and the upstream segment of the oil and gas industry. The upstream segment is not intended to necessarily be co-extensive with the use of the term "exploration and production operations" in Regulation Number 7. The Commission recognizes that there is some "compression" undertaken at well production facilities, and intends that those operations are part of the upstream segment, not the midstream segment (even if they would otherwise fall under the gathering and boosting segment as that term is used in the EPA's Greenhouse Gas Reporting Program). The Commission directs the Division to consider how centralized oil facilities, such as those receiving hydrocarbon liquids from tankless well production facilities, should be classified for purposes of these programs. The Commission has also defined the oil and natural gas compression segment to reflect the above; to clarify, if equipment is operated by the upstream operator at a well production facility, the equipment is not part of the oil and natural gas compression segment. However, if an emission point is located at a well production facility but operated by a midstream operator, that emission point is part of the oil and natural gas compression segment.

The Commission has defined "disproportionately impacted community" consistent with the definition in HB 21-1266. However, the statute does not call out which communities are considered disproportionately impacted. CDPHE is developing a tool, called "enviroscreen", that will be utilized for members of the public and the regulated community to understand which communities in Colorado are disproportionately impacted.

However, this tool was not ready at the time of this rulemaking. Therefore, the Commission has determined that the disproportionately impacted communities existing at the time of this program - and therefore the communities in which provisions of this program apply - are identified in the map. The Commission has included, in the definition of this term, a reference to the climate equity data map at which more detail can be seen of the boundaries of the disproportionately impacted communities addressed by this rulemaking. The Commission has also referenced a list of the census block groups by 12-digit FIPS code covered by the map incorporated into the definition, identifying what census blocks are disproportionately impacted communities as of the date of this rulemaking.

The Commission intends that the Division will preserve a copy of the map and the accompanying list in place at the time of this rulemaking such that sources may use the map and list as a guide for understanding the applicability of requirements. The Commission added the definition of natural gas processing segment, which is intended to mirror the applicability of sources reporting to EPA in the Greenhouse Gas Reporting Rule, 40 CFR Part 98, as the natural gas processing segment. The Commission added a definition of “preproduction emissions” and “production emissions”. It is the intent of the Commission that all emissions from the well, wellhead equipment (both permanent and temporary), the well production facility, and the piping between the wellhead and the well production facility – everything “upstream” of the midstream segment – are accounted for in one of these two definitions.

Midstream Steering Committee for Fuel Combustion Equipment: Part B, Section III.

The Commission recognizes that emissions from midstream fuel combustion equipment are a significant portion of the midstream segment's greenhouse gas emissions. Emissions from fuel combustion equipment covered by this program include not only the carbon dioxide emissions, but also the methane and other greenhouse gases from that same equipment. For example, “methane slip” from engines, meaning the methane that is not combusted and that escapes unburnt into the atmosphere, is included in this program. The Commission also recognizes that reducing emissions from fuel combustion equipment, particularly as it involves electrification of large combustion equipment, will need to be carefully coordinated to ensure the continued reliability of Colorado's power grid. As a result, the Commission established the Midstream Steering Committee to develop guidance for operators on how to develop each operator's company-specific emission reduction plan, addressing the mechanisms and timetable for reducing greenhouse gas from fuel combustion equipment. The Commission adopted minimum requirements for participation on the steering committee. To the extent that more than one representative of a disproportionately impacted community participates on the steering committee, the Commission intends that more than one disproportionately impacted community would be represented. Recognizing that the Commission does not have the authority to require participation by the Colorado Energy Office or Public Utilities Commission staff but that their participation will be valuable, the Commission intends that the Division include them on the steering committee if they are willing.

The rules adopted by the Commission mandate that midstream segment owners and operators submit certain specified information to the steering committee by July 31, 2022. This information must include an identification of all fuel combustion equipment owned or operated by each midstream segment operator. There is no de minimis equipment that should not be identified, though not all equipment may end up in the operator's ERP or the segment ERP.

This information should also allow the steering committee to easily understand what equipment - and how much emissions - are located within disproportionately impacted communities. Owners and operators must all include an estimate of the total annual power demand required for use of all midstream combustion equipment owned or operated by each midstream segment operator. When reporting this estimate, the owners and operators should identify whether such equipment is required to run continuously or whether operation of certain equipment is intermittent or interruptible. Owners and operators are also required to seek an estimate of existing transmission and/or distribution capacity to serve the estimated electric load (i.e. total power demand) at the specific locations of the midstream segment fuel combustion equipment, and provide that information to the steering committee.

Transmission and/or distribution capacity should be obtained from the appropriate electric utility, transmission, or distribution service provider and reported to the steering committee when made available by the utility or utilities. Owners and operators should evaluate whether their midstream segment fuel combustion equipment operations require firm or non-firm transmission service. Should an owner or operator consider potential electrification, the Commission intends the owner or operator will continue to engage with the appropriate electric utility, transmission, or distribution service provider.

If the midstream steering committee determines that it needs additional information, it may request it from the midstream segment operators. The rules provide that such additional information should be requested by April 30, 2022; however, this does not limit the Division's authority to use existing statutes and regulatory authority to require the submittal of additional information to the Division. The Division must preserve trade secrets and other confidential business information, if provided to the Division, as required by the Colorado Open Records Act. The Commission intends that the midstream steering committee work with electric utilities as well as regulatory agencies that have the information in publically available files. To the extent the midstream steering committee seeks voluminous information available from the PUC, the Commission encourages the midstream steering committee to first seek to obtain such information from the PUC directly. The Commission intends the electric utilities work collaboratively with the midstream steering committee to assist the committee in locating and, if necessary, clarifying such information. The Commission does not intend that the Division will provide, or that the steering committee will seek confidential or trade secret information from utilities, such as pricing information. The Commission intends that the electric utilities will work collaboratively with the midstream steering committee to assist the steering committee in locating and, if necessary, clarifying requested information.

The Division will provide the steering committee with the 2015 baseline for industrial greenhouse gas emissions, from which the midstream segment needs to achieve a twenty-percent (20%) reduction by 2030. While the Commission intends that reductions should be achieved as quickly as possible, the Commission does not demand a linear reduction in emissions between 2025 and 2030. Further, the emissions reductions considered in this 20% reduction requirement include only emissions from the fuel combustion equipment in the Industrial Sector of the GHG Roadmap. Emissions from the power sector (generally referred to as "Scope 2 emissions") that could result from electrification of midstream fuel combustion equipment, are considered under another portion of the GHG Roadmap.

The midstream steering committee will prepare a guidance document (or series of documents) to help midstream segment owners and operators in preparing their own company-specific emission reduction plans. The guidance document is not intended to be an independent analysis of electric grid availability or a forecast of available resources; it is designed to assist operators in identifying the issues they must consider when preparing their company ERPs. The Commission has asked that utilities participate on the midstream steering committee to help inform the issues that must be addressed in considering electrification as an emission reduction strategy, but this committee is not designed to perform independent analysis such as that performed by individual operators, utilities, or the PUC. The Commission intends that the guidance document will specify methods for calculating emissions from fuel combustion equipment, and that the Division must approve of the calculation methods before they can be included in the guidance.

Specifically, the Commission directs the Division to evaluate calculation methods used in the annual emission reports to the Division under Regulation Number 7, Part D, Section V., compare those with methods used to report to the U.S. EPA under the greenhouse gas reporting program and other available calculation methods, and determine the appropriate methods to be used by operators. The Commission expects consistency in the calculation and reporting methods used by operators, as much as practicable. The Commission directs the Division to ensure that midstream steering committee work product, like the guidance document, is translated into Spanish and made available with the draft guidance. The Commission also intends that the Division hold public meetings to receive feedback on the midstream steering committee work production (both the guidance and the midstream segment ERP), and that notice of these meetings be made at least thirty (30) days prior and that the notice and agenda be translated into Spanish.

Operators must submit company emission reduction plans to the steering committee in accordance with the requirements of Section III.D.4. and containing the information specified in the guidance and regulation. The Commission intends that the Division will prepare emission reduction requirements for any midstream owner or operator that does not timely submit its company ERP; however, if a company ERP is submitted late, the Division may nonetheless approve of inclusion of that company ERP into the segment ERP.

The Commission structured the rule such that the midstream steering committee submits a proposed regulatory package - with supporting analysis - to the Division instead of directly to the Commission. The Commission intends that the Division will review the steering committee's proposal, and use its independent judgment as to whether the proposal will ensure compliance with the requirements of § 25-7-105(1)(e)(XIII), C.R.S. - i.e. achieves a 20% reduction in CO₂e from the 2015 baseline - for the midstream segment. The midstream segment emission reduction plan submitted by the Division to the Commission will therefore be based on the segment-wide emission reduction plan developed by the midstream steering committee, but will consider the public comments received and the Division's evaluation of whether the steering committee's emission reduction plan will achieve the state's goals for CO₂ reductions from midstream segment fuel combustion equipment.

Upstream Greenhouse Gas Intensity: Part B, Section IV.

In these revisions, the Commission has set targets for greenhouse gas intensity that step-down over time to achieve the GHG reductions required of upstream segment operations to meet the requirements of HB 21-1266. There is currently no regulatory greenhouse gas intensity program in the United States of which the Commission is aware. However, there are a number of voluntary programs, including ONE Future, the Natural Gas Sustainability Initiative, etc. Multiple Colorado operators are already participating in voluntary methane intensity programs.

While this program is new from a regulatory standpoint, the Commission feels it is an important program to guarantee - as much as possible - the emissions reductions needed from oil and gas upstream operations to meet the requirements of HB 21-1266. The Commission has adopted many regulations specific to oil and gas operations since 2005, including several since 2019 that are still in the process of being implemented. The regulations already adopted, in conjunction with other laws and regulations and the new direct regulations being adopted in this same rulemaking process in Regulation Number 7, Part D, will all provide the necessary emissions reductions. If existing and new measures are still not enough to ensure the emission reduction targets are met, this intensity program will require additional enforceable emission reduction actions from operators above their intensity targets. The Commission believes that the direct regulations adopted as part of this rulemaking along with those adopted and still being fully implemented will achieve or very nearly achieve the emission reductions required, and this intensity program will create an enforceable mechanism to ensure that any remaining required reductions are realized.

Notwithstanding the foregoing, in the event that the annual emissions inventories or other data collected by the Division reveals that the intensity program is not achieving the reductions necessary to achieve either the state's 2025 or 2030 greenhouse gas goals for these sectors, the Commission directs the Division to - consistently with the requirements of § 25-7-105(1)(e)(VII), C.R.S. - propose requirements that include additional direct regulation. The Commission intends that the same operator that accounts, in the intensity program, for the production under Section IV.D. and the emissions in the intensity calculation, is the operator that accounts for the emissions under Regulation Number 7 reporting requirements. For the purposes of this intensity program, this operator is referred to as the "Intensity operator," as defined in Regulation Number 22, Section IV.A.12.

Calculating Intensity

The Commission, for consistency across Colorado operations, determined that in converting natural gas production to barrels of oil equivalent, owners and operators should use the conversion factor of 5800 standard cubic feet of natural gas per barrel of oil equivalent. To clarify the calculation for intensity, which requires use of oil and natural gas production in thousand barrels of oil equivalent (kBOE), as well as the common units used for reporting natural gas production of million standard cubic feet (MMscf), operators should divide natural gas production reported in MMscf by 5.8 MMscf/kBOE.

The equation for calculating total production in kBOE is:

$$TP \text{ (kBOE)} = [NGP \text{ (MMscf)} / 5.8 \text{ (MMscf/kBOE)}] + [OP \text{ (bbl)} / 1000 \text{ (bbl/kBOE)}]$$

Where:

TP (kBOE) = total annual production of natural gas and oil in the units of kBOE

NGP(MMscf) = annual natural gas production in the units of million standard cubic feet

OP (bbl) = annual oil production in the units of barrels of oil

The Commission set greenhouse gas intensity targets to cover all preproduction emissions and production emissions from upstream oil and gas operations. The intensity program covers emissions in both the “Industrial” sector and the “Oil and Gas” sector in the GHG Roadmap. The Commission recognizes that these sectors have different statutory targets for GHG reductions; the “Industrial” sector must meet a 20% reduction from the 2015 baseline by 2030, and the “Oil and Gas” sector must meet a 36% reduction from the 2005 baseline by 2025 and a 60% reduction from the 2005 baseline by 2030. The Commission adopted the projected throughput from the GHG Roadmap inventory work for purposes of setting these targets. However, the Commission understands that some stakeholders may sponsor a study of production forecasts to further inform and refine the established intensity targets. The Commission is willing to consider the results of such a study, and directs that the Division consider the results of any such study in the 2023 verification rulemaking (as discussed) and propose updating targets as appropriate. The Commission determined that it was appropriate to set more stringent intensity targets for the larger producers in the state (i.e., “majority producers”), than for the smaller producers (i.e., “minority producers”). The threshold set by the Commission for determining majority producers was based on accounting for the operators representing at least 80% of the state’s oil and natural gas production. The Commission recognizes that the smaller producers - that largely operate wells with declining production - have less opportunity to reduce intensity than the larger operators. However, the Commission does not intend that older facilities with declining production should just be permitted to operate with ever-increasing intensities, and directs the Division to study a potential facility-specific maximum allowable intensity and propose it as part of the 2023 verification rulemaking, if appropriate.

Acquisitions

The Commission adopted provisions providing how to adjust operator-specific reduction requirements upon the occurrence of asset transfer or other business realities. The Commission does not intend that operators may meet their greenhouse gas intensity targets simply by selling low-performing facilities, and the provisions for sales and acquisitions are designed to ensure both statewide emission reductions and greenhouse gas intensity targets are achieved. Generally, if an owner or operator sells its interest in a well or facility at some point during a calendar year, the owner or operator will report the production and emissions for the time period of its ownership, and the purchasing entity will report the production and emissions for the time period of its ownership, triggered by the closing date of the transaction. However, because majority and minority operators have different targets, the Commission clarifies how those situations should be addressed.

First, if a majority operator acquires assets from a minority operator, the majority operator would have some time before the acquired assets would be subject to the majority operator intensity targets. During the year of the acquisition, the majority operator need only demonstrate that the emissions and production from the acquired assets meet the minority operator targets – for the time period subsequent to the date of closing of the transaction.

However, in the calendar year after the acquisition, the majority operator would include the emissions and production from the acquired assets in its company-wide intensity calculation and need to meet the majority operator targets. Second, if a minority operator acquires assets from a majority operator, for the year of and the year following the acquisition, those assets need to meet the minority operator target for the acquired assets and would be included in the company-wide intensity calculation subject to the minority operator target. Under these situations, the Commission recognizes that there may be limited reasons why some additional time could be necessary. The Commission encourages operators to timely reach out to the Division if more time is required, and for the Division to work with operators that demonstrate equivalent or better emission reductions would be achieved. However, the timing of the acquisition itself, or the failure to conduct environmental due diligence prior to the acquisition, are not such limited reasons that the Commission intends the Division use its discretion to accept.

If, at any point, a minority operator has production over 10,000 kBOE, or if a minority operator increases its production by 2,500 kBOE over the prior calendar year production - then in the calendar year after the acquisition, the minority operator would become a majority operator and be subject to those targets (and other rules applicable to majority operators). Otherwise, if a minority operator acquires assets (or merges with) a minority operator, the minority targets must be met in the year of the acquisition for all assets, including the acquired assets. If a majority operator sells assets, the majority operator targets must still be met, even if that operator's production falls below 10,000 kBOE. If a new to market operator acquires the assets of a minority operator, the new to market operator becomes a minority operator and the minority operator targets apply; similarly, if a new to market operator acquires the assets of a majority operator, the majority operator targets apply.

New Facility Intensity

The Commission also determined that it was necessary to set a “new facility intensity” target, to recognize that operators of new well production facilities must continue to improve their performance, and reduce GHG emissions associated with new production. The Commission relied upon studies of intensity at oil and gas operations to determine that a new facility GHG intensity should be approximately 78.5% of the majority operator greenhouse gas intensity target. These new facility targets are in addition to the majority operator/minority operator targets in Section IV.B. So, a majority operator who constructs a new well production facility in 2027 must meet: (1) the greenhouse gas intensity target in Section IV.B.3.a. for all its upstream segment operations including the newly constructed well production facility (and subsequent majority operator targets in Section IV.B.); (2) the new facility intensity target in Section IV.C.3. for calendar year 2027 for the newly constructed well production facility; and (3) the new facility intensity target in Section IV.C.4. for calendar year 2028 for the newly constructed well production facility.

Greenhouse Gas Intensity Plans

In Section IV.E, the Commission requires that owners or operators submit greenhouse gas intensity plans. The primary purpose of these plans is for owners or operators to demonstrate to the Division how they intend to meet the 2025, 2027, and 2030 greenhouse gas intensity targets in Sections IV.B.2. through IV.B.4. The Commission determined to require submittal of site-specific plans that identify at which sites emission reductions will be achieved to ensure that the greenhouse gas intensity targets are met, all the way through the 2030 targets. The Commission intends that operators be permitted to update their plans after submittal, but the greenhouse gas intensity plan in effect must always demonstrate that the targets will be achieved.

The Commission is also requiring annual verifications identifying what actions were taken, consistent with the plans. In addition to annual verifications to the intensity plans, the Commission has required submittal of asset transfer plan updates specific to any assets a company purchases. These assets transfer plans are to ensure that operators do not purchase high-intensity sites from another operator without making any improvements to those sites that would have been made if the sites had not been transferred. The Commission adopted this requirement to protect the integrity of the program and ensure emission reductions are realized as expected.

Verification

In Section IV.F., the Commission directs the Division to develop a mechanism to track progress towards meeting the state's GHG reduction goals and to evaluate compliance with the greenhouse gas intensity targets and new facility intensity targets in Sections IV.B. and IV.C. The Commission determined that it was advisable to give the Division time in 2021 and 2022 (1) to evaluate the annual emission reports submitted in 2021 and 2022, (2) to evaluate different calculation and emission quantification methodologies for different emitting activities and equipment, and (3) to consider the impact and results of the aerial and ground-based survey work being conducted by the Division (and contractors) in 2021 (because this data will not be fully available until the spring of 2022) as well as other relevant surveys. In 2023, the Commission expects that the Division will propose a verification plan after considering the current status of oil and gas GHG emissions, based on Regulation Number 7 reporting and top-down monitoring results, production increases or decreases based on data reported to the OGCC, the aerial and ground-based survey work, and other important considerations, such as the availability, reliability, and cost-effectiveness of direct measurement techniques as appropriate. This 2023 rulemaking may also address other aspects of the intensity program, including evaluating progress towards the reduction targets for oil and gas in § 25-7-105(1)(e)(XII).

Disproportionately Impacted Communities

The Commission recognizes the critical need for emission reductions - and in particular emission reductions of GHG co-pollutants - within disproportionately impacted communities. The Commission also included the definitions of "co-benefits" and "harmful air pollutants." These terms are used in Sections III. and IV. to ensure that the midstream segment emission reduction plan and operators' greenhouse gas intensity plans achieve and prioritize reductions of co-pollutants in disproportionately impacted communities. In Section III., the Commission has included a requirement that operators prioritize and quantify reductions of co-pollutants within disproportionately impacted communities in their ERPs. In Section IV, the Commission required that greenhouse gas intensity plans identify the facilities in disproportionately impacted communities and demonstrate how co-pollutant emission reductions will be prioritized therein. The Commission is further requiring that annual verifications to intensity plans demonstrate that emission reductions were prioritized in disproportionately impacted communities, and must quantify the reductions of harmful air pollutants. The Commission intends that where the same or similar technological and economic considerations apply to reductions that can be achieved in a disproportionately impacted community or elsewhere, as it pertains to determining at which facilities or which activities to reduce emission, reductions within disproportionately impacted communities must be prioritized over other GHG reduction options. The 2023 verification rulemaking may also include regulatory provisions addressing how the Division will evaluate compliance with the requirement to prioritize reductions in disproportionately impacted communities.

The Commission also directs the Division to work with the Environmental Justice Unit at CDPHE to ensure access to GHG Intensity Plan information – and the impact of GHG Intensity Plans on DI Communities – by the residents of those communities. The Commission has also included, in related revisions to Regulation Number 7, Part D, Section VI., a direction that the Division report out on these issues to the Commission on an annual basis.

Incorporation by Reference

The Commission will update regulatory references as needed as opportunities arrive.

Additional Considerations

The following are additional findings of the Commission made in accordance with the Act:

§ 25-7-110.5(5)(b), C.R.S.

As these revisions exceed and may differ from the federal rules under the federal act, in accordance with § 25-7-110.5(5)(b), C.R.S., the Commission determines:

- (I) Any federal requirements that are applicable to this situation with a commentary on those requirements;

There are no federal regulations applicable to the situations covered by the provisions of Part B, Sections III and IV. However, there are existing federal regulations that seek to identify and reduce methane emissions from the oil and gas industry, such as the Greenhouse Gas Reporting Program (40 CFR Part 98) and New Source Performance Standards (30 CFR Part 60) Subparts KKK, OOOO, and OOOOa. Part B, Sections III and IV do not conflict with any applicable current federal regulations. The EPA will soon release proposals to address greenhouse gas emissions from oil and gas equipment, but EPA's proposal does not address the particular situations addressed by the Commission's revisions here. EPA also asks states to consider environmental justice as part of their actions, though there are no specific regulatory requirements at this time. In this revision, Part B, Sections III and IV expand on environmental justice considerations by incorporating the definition of "disproportionately impacted communities" (DI Community), and seeking to prioritize reductions in DI communities.

- (II) Whether the applicable federal requirements are performance-based or technology-based and whether there is any flexibility in those requirements, and if not, why not;

The federal requirements addressing methane reductions from the oil and gas sector (though not applicable in this situation) as described are both performance-based and technology-based. Current federal requirements for methane reductions speak to achieving a control efficiency, with minimal flexibility. Some requirements also mandate the use of technology to detect methane emissions. However, EPA does provide some flexibility in the technology that can be used.

- (III) Whether the applicable federal requirements specifically address the issues that are of concern to Colorado and whether data or information that would reasonably reflect Colorado's concern and situation was considered in the federal process that established the federal requirements;

There are federal requirements that seek to reduce greenhouse gas from oil and gas operations, though none that are addressed to the specific goals of Part B, Sections III and IV. The Commission's revisions address Colorado-specific requirements and needs, like those of HB 19-1261 and HB 21-1266, which were not considered in any federal process.

- (IV) Whether the proposed requirement will improve the ability of the regulated community to comply in a more cost-effective way by clarifying confusing or potentially conflicting requirements (within or cross-media), increasing certainty, or preventing or reducing the need for costly retrofit to meet more stringent requirements later;

The proposed midstream and upstream programs will ensure that the regulated community can achieve required GHG emissions reductions in cost-effective ways by giving covered entities options to reduce emissions through direct regulation and development of company-specific plans to ensure compliance with state targets.

- (V) Whether there is a timing issue which might justify changing the time frame for implementation of federal requirements;

This is a state-specific rule that is not implementing federal requirements. Thus, no timing issue exists.

- (VI) Whether the proposed requirement will assist in establishing and maintaining a reasonable margin for accommodation of uncertainty and future growth;

The regulatory provisions allow a reasonable amount of time for affected entities to comply with the new revisions. As such, affected businesses or industrial sectors are afforded a reasonable margin for accommodation of uncertainty and future growth. The rules adopted by the Commission establish a new midstream steering committee to assist in analyzing the technical feasibility and economic reasonability of future means of reducing emissions in this segment. The midstream steering committee will prepare a guidance document (or series of documents) to help midstream segment owners and operators in preparing their own company-specific emission reduction plans, thus allowing for additional time to achieve compliance. The upstream intensity program also accommodates uncertainty, by allowing for an additional year (at least) to consider and develop a verification program.

- (VII) Whether the proposed requirement establishes or maintains reasonable equity in the requirements for various sources;

With respect to any sources already operating within the upstream segment, the rule establishes reasonable equity because it takes into account the size of the operator, the percentage of ownership each operator claims, and the location of the facility. With respect to any new well production facilities subject to the upstream statewide intensity program requirements, the rule establishes reasonable equity as requirements are the same for each source type based on age of the production well. This is also demonstrated for the midstream segment with the establishment of the midstream steering committee to ensure equity across operators based on location and utility provider.

- (VIII) Whether others would face increased costs if a more stringent rule is not enacted;

The Commission believes that the cost of inaction would be greater to industry and the public than the costs associated with the revisions to Part B, Sections III. and IV. Not only with respect to the social cost of climate change, but also more direct costs. These revisions are designed with the maximum flexibility for the regulated community. Under HB 21-1266, if the state is not on track to achieve the emission reduction goals, the Commission must adopt further regulations to achieve those goals. Future efforts are likely to be not as cost-effective as the flexible programs in these revisions.

- (IX) Whether the proposed requirement includes procedural, reporting, or monitoring requirements that are different from applicable federal requirements and, if so, why and what the “compelling reason” is for different procedural, reporting, or monitoring requirements;

Reporting requirements beyond those required under federal Part 98 are necessary to effectively quantify and measure Colorado’s progress toward statewide GHG reductions and to achieve the public health, safety, and welfare goals set forth in § 25-7-102, C.R.S.

Many of the reporting requirements associated with these programs are in existing Commission regulations, in Regulation Number 7, Part D. However, these revisions do require some additional reporting. Under these requirements, owners and operators of these sources will be required to compile and report directly to the Division information collected by or available to them for business or other regulatory purposes. While this may overlap with some other federal reporting requirements, it is expected there will be reporting beyond what is required federally.

- (X) Whether demonstrated technology is available to comply with the proposed requirement;

Demonstrated technology exists to enable compliance with the requirements of these revisions.

- (XI) Whether the proposed requirement will contribute to the prevention of pollution or address a potential problem and represent a more cost-effective environmental gain;

These revisions will cost-effectively reduce statewide GHG emissions to meet the legislative directive of the State Air Act, as revised by SB 19-181, HB 19-1261, and HB 21-1266. As noted, the General Assembly has acknowledged that climate change impacts Colorado's economy and directed that GHG emissions should be reduced across the many sectors of our economy. Colorado has established specific GHG reduction goals within its statutes. Programs established in this rulemaking action - in both Regulation Numbers 7 and 22 - provide mechanisms for GHG reductions to occur cost-effectively across a specific, high-emitting sector of the state's economy.

- (XII) Whether an alternative rule, including a no-action alternative, would address the required standard.

The new regulatory requirements and amendments are needed to achieve the statutorily mandated emission reductions. As noted, the State Air Act requires the Commission to implement GHG emission reduction strategies in order to secure reductions of pollution consistent with the statewide GHG emission reduction goals. Currently emissions projections over the next decade demonstrate that a no-action alternative would fall short of achieving Colorado's reduction goals. Additionally, no alternative combination of sector-specific regulations has been identified that is sufficient to meet the state's GHG emissions reductions goals.

Findings of Fact

To the extent that § 25-7-110.8, C.R.S., requirements apply to this rulemaking, and after considering all the information in the record, the Commission hereby makes the determination that:

(I) These rules are based upon reasonably available, validated, reviewed, and sound scientific methodologies, and the Commission has considered all information submitted by interested parties.

(II) Evidence in the record supports the finding that the rules shall result in a demonstrable reduction of greenhouse gas and VOC emissions.

(III) Evidence in the record supports the finding that the rules shall bring about reductions in risks to human health and the environment that justify the costs to implement and comply with the rules.

(IV) The rules are the most cost-effective alternative to achieve the necessary reduction in air pollution and provide the regulated entity flexibility.

(V) The selected regulatory alternative will maximize the air quality benefits of regulation in the most cost-effective manner.

Z. December 15, 2022 (Revisions to Part A, Sections I., II., and Appendix A; Part B, Sections IV. and VI.; Part C, Sections I., II., III., and IV.; Part D, Sections I., II., and III.; and Part E, Sections I., II., III., IV., VI., VII., and VIII.)

This Statement of Basis, Specific Statutory Authority, and Purpose complies with the requirements of the State Administrative Procedure Act, § 24-4-103(4), C.R.S., the Colorado Air Pollution Prevention and Control Act, §§ 25-7-110 and 25-7-110.5, C.R.S., and the Air Quality Control Commission's (Commission) Procedural Rules, 5 Code Colo. Reg. §1001-1.

Basis

On October 7, 2022, EPA reclassified the Denver Metro/North Front Range (DM/NFR) to severe for the 2008 8-hour Ozone National Ambient Air Quality Standard of 75 parts per billion (ppb) (2008 NAAQS), after 2019-2021 ozone data failed to show attainment. See Fed. Reg. 60926. Separately, EPA has also designated the DM/NFR as marginal nonattainment for the 2015 ozone NAAQS of 70 ppb, effective August 3, 2018 (83 Fed. Reg. 25776 (June 4, 2018)). On November 30, 2021, EPA expanded the boundary of the 2015 ozone nonattainment area to include all of Weld County, effective December 30, 2021 (86 Fed. Reg. 67864). On October 7, 2022, EPA reclassified the DM/NFR and northern Weld County to moderate, after 2019-2021 ozone data failed to show attainment. See Fed. Reg. 60897. To ensure progress towards attainment of the 2008 and 2015 ozone NAAQS, the Commission adopted revisions to Regulation Number 7 to include reasonably available control requirements (RACT) for major sources of volatile organic compounds (VOC) or nitrogen oxides (NOx) in the nonattainment areas, specifically for combustion equipment, wood coating, solvent use, bakery operations, digital printing, poultry waste processing, oil stabilization facilities, class II injection well facilities, and industrial waste; to include state only provisions in the SIP concerning specific oil and gas sector engines, pneumatic controllers, and liquids loadout as SIP strengthening measures; to clarify the applicability of requirements to newly classified ozone nonattainment areas; to include provisions corresponding to recommendations in EPA's Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings (Miscellaneous Metal CTG) concerning motor vehicle materials; and to include provisions establishing VOC content limits on automotive coatings. The Commission also adopted revisions to expand gasoline tank truck testing requirements.

Statutory Authority

The State Air Act, specifically § 25-7-105(1), directs the Commission to promulgate such rules and regulations as are consistent with the legislative declaration set forth in § 25-7-102 and that are necessary for the proper implementation and administration of Article 7. The Act broadly defines air pollutant to include essentially any gas emitted into the atmosphere (and, as such, includes VOC, NOx, methane and other hydrocarbons) and provides the Commission broad authority to regulate air pollutants. Section 105(1)(a)(I) directs the Commission to adopt a state implementation plan (SIP) to attain the NAAQS. § 25-7-106 provides the Commission maximum flexibility in developing an effective air quality program and promulgating such combination of regulations as may be necessary or desirable to carry out that program. § 25-7-106 also authorizes the Commission to promulgate emission control regulations applicable to the entire state, specified areas or zones, or a specified class of pollution. § 25-7-106(6) further authorizes the Commission to require owners and operators of any air pollution source to monitor, record, and report information. §§ 25-7-109(1)(a) and (2) of the Act authorize the Commission to promulgate regulations requiring effective and practical air pollution controls for significant sources and categories of sources and emission control regulations pertaining to nitrogen oxides and hydrocarbons.

Purpose

The following section sets forth the Commission's purpose in adopting the revisions to Regulation Number 7, and includes the technological and scientific rationale for the adoption of the revisions. The revisions also correct typographical, grammatical, and formatting errors found through the regulation.

Major Source RACT

Due to the reclassifications to severe and moderate, Colorado must submit revisions to its SIP to address the Clean Air Act's (CAA) ozone nonattainment area requirements, as set forth in CAA §§ 172, 182(b), 182(d), and the final SIP Requirements Rules. Severe and Moderate SIPs must include provisions that require the implementation of RACT for major sources of VOC and/or NO_x (i.e., sources in a severe nonattainment area that emit or have the potential to emit 25 tpy or more and sources in a moderate nonattainment area that emit or have the potential to emit 100 tpy or more) and for each category of VOC sources covered by a Control Technique Guideline (CTG) for which Colorado has sources in the nonattainment area.

Therefore, to address the severe nonattainment area requirements under CAA § 182(d), the Commission adopted revisions to Regulation Number 7 to include RACT requirements in Colorado's ozone SIP for 25 tpy major sources of VOC and/or NO_x including expanding the combustion equipment requirements; expanding wood coating requirements; expanding solvent use requirements; incorporating requirements in the SIP for oil stabilization and class II injection well facilities; and developing new categorical rules for bakery operations, digital printing, poultry waste, and industrial waste. To address the moderate nonattainment area requirements under CAA § 182(b), the Commission adopted revisions to Regulation Number 7 to include RACT requirements in Colorado's ozone SIP for 100 tpy major sources of VOC and/or NO_x in northern Weld County including clarifying the applicability of SIP provisions to any ozone nonattainment area, in contrast to the specified 8-hour ozone control area; expanding the combustion equipment requirements; and expanding requirements for oil and gas operations and equipment. The Commission also adopted revised requirements for glass melt furnaces.

Boilers

In 2019, the Commission expanded the combustion equipment requirements adopted in 2016 and 2018 for the 100 tpy major sources to the 50 tpy major sources. The Commission now further expands the categorical RACT requirements to boilers at 25 tpy major sources in the 8-hour ozone control area and at 100 tpy major sources in northern Weld County. The Commission also adopted an emission limit for wood fired boilers at 25 tpy major sources. The owners or operators of these boilers will comply with the combustion process adjustment, periodic performance testing, and recordkeeping requirements.

Engines

In 2019, the Commission expanded the NO_x emission limit requirements for compression ignition reciprocating internal combustion engines (RICE) and combustion process adjustment requirements for stationary RICE. The Commission now further expands the categorical RACT requirements for engines at 25 tpy major sources in the 8-hour ozone control area and at 100 tpy major sources in northern Weld County. The owners or operators of these engines will continue to comply with the specified NO_x emission limit or applicable NSPS NO_x limit, combustion process adjustment, periodic performance testing, and recordkeeping requirements.

Turbines

In 2019, the Commission adopted provisions requiring turbines constructed before February 18, 2005, to comply with NSPS GG and turbines construction after February 18, 2005, to comply with NSPS KKKK. In 2020, the Commission adopted revisions to require all turbines to comply with emission limits in NSPS KKKK. The Commission now further expands the categorical RACT requirements to turbines at 25 tpy major sources in the 8-hour ozone control area and at 100 tpy major sources in northern Weld County. As with the previous adoption of the NSPS KKKK limits, the Commission intends the limits to apply as EPA has written in the rule. The Commission also adopted specific requirements for one facility based on the permitted emission limits and monitoring requirements. All turbines will continue to comply with good air practices for minimizing emissions, combustion process adjustment, and recordkeeping requirements.

Process heaters

In 2021, the Commission adopted revisions to Regulation Number 7 to include RACT requirements in Colorado's ozone SIP for process heaters at major sources of NO_x emissions, specifically NO_x emission limits for natural gas-fired and refinery gas-fired process heaters with a heat input rate greater than or equal to 5 MMBtu/hr. The Commission also expanded these provisions on a state-only basis to process heaters at sources that emit, or have the potential to emit, 25 tpy NO_x, in anticipation of a reclassification to severe nonattainment. The Commission now removes the state-only designation to include these requirements in the SIP. The Commission also expanded the categorical RACT requirements to process heaters at 100 tpy major sources in northern Weld County.

Glass melt furnaces

In 2018, the Commission adopted requirements for glass melt furnaces at 100 tpy major sources in the 8-hour ozone control area. In this rulemaking, the Commission revised those requirements to address concerns expressed by EPA about start-up and shut-down operations that were excluded from the NO_x emission limit, as adopted based on applicable federal requirements. The revised limit now applies during all periods except for initial startup where the owner or operator must account for startup emissions by calculating emissions from fuel consumption.

Wood coating

In 2020, the Commission adopted requirements for wood surface coating based on recommendations in EPA's Control of Volatile Organic Compound Emissions from Wood Furniture Manufacturing Operations CTG (Wood Furniture CTG) (1996) and EPA's A Guide to the Wood Furniture CTG and NESHAP (1997). The Commission now expands the wood surface coating requirements to the surface coating of other wood products 25 tpy major sources in the 8-hour ozone control area.

Solvent use

In 2019, the Commission adopted a new categorical rule regarding general solvent use operations. The Commission now expands the solvent use requirements to operations at 25 tpy major sources in the 8-hour ozone control area.

Bakery operations

The Commission adopted a new categorical rule for bakery ovens and bakery scrap recycling at 25 tpy major sources in the 8-hour ozone control area. The primary VOC associated with baking is ethanol, produced when yeast reacts with sugars in bread dough. VOC emissions also result from the drying of bakery scrap product. The new requirements reduce VOC emissions through the use of work practices and by routing bakery oven emissions to a control device. One potentially subject facility is newly installing such control device and the adopted requirements provide an appropriate implementation time period for such installation. The applicable work practices and recordkeeping requirements will continue to apply.

Digital printing

The Commission adopted a new categorical rule for digital printing operations at 25 tpy major sources in the 8-hour ozone control area. The adopted work practice and recordkeeping requirements are similar to those adopted in other ozone nonattainment areas and will reduce fugitive VOC emissions from printing.

Poultry waste processing

The Commission adopted a new categorical rule for poultry waste dryers at 25 tpy major sources in the 8-hour ozone control area. The adopted work practices will reduce VOC emissions from the drying of poultry waste (i.e., manure and spent hens).

Solid waste facilities

The Commission adopted a new categorical rule for solid waste disposal at 25 tpy major sources in the 8-hour ozone control area. The adopted work practices and recordkeeping requirements will reduce VOC emissions from facilities that dispose of oil and gas wastes. The Commission does not intend at this time for these provisions to apply to municipal solid waste landfills, produced water disposal facilities, or oil and gas operations that generate oil and gas waste.

Oil and gas sources

The Commission expanded the applicability of specific existing oil and gas SIP provisions in Part D, Section I. to oil stabilization facilities and class II injection well facilities at 25 tpy major sources in the 8-hour ozone control area. The expanded requirements are currently applicable on a state-only or permit basis but may require additional recordkeeping. The Commission notes that the definition of centralized oil stabilization facility currently only applies to one facility and is not intended to apply to facilities that receive combined produced water and condensate/crude oil that flows from a wellhead to a production or centralized tank battery.

Automotive

Automotive materials

In 2021, the Commission revised the metal surface coating requirements in Regulation Number 7 to update the provisions based on EPA's 1978 CTG and correspond to the recommendations in EPA's 2008 Metal Coating CTG. The Commission did not, at that time, propose to incorporate the VOC content limits for certain motor vehicle materials used at facilities that are not automobile or light-duty truck assembly coating facilities due to the overlap with EPA's national rule, National Volatile Organic Compound Emission Standards for Automobile Refinish Coatings (40 CFR Part 59 Subpart B).

EPA has since raised concerns about the differing definitions concerning motor vehicle materials, and thus potential applicability, between EPA's Metal Coating CTG and EPA's National Automobile Rule. Therefore, the Commission now incorporates the motor vehicle materials VOC content limits and associated work practices into Regulation Number 7.

Automotive coatings

The Commission adopted VOC content limits, and associated work practices and recordkeeping, as contingency measures for the Moderate SIP. The California Air Resources Board (CARB) developed a Suggested Control Measure for Automotive Coatings (SCM) that achieves additional reductions of VOCs from automotive coatings beyond EPA's national automobile refinishing rule. The adopted requirements will apply to anyone who sells, supplies, offers for sale, or manufacturers specified automotive coatings and any person who applies or solicits the application of specified automotive coatings should Colorado fail to attain the 2015 ozone NAAQS by the applicable moderate attainment date.

NAA applicability

The Commission adopted revisions to Regulation Number 7 to clarify the applicability of Regulation Number 7 to "an ozone nonattainment" area. Regulation Number 7, Part A, Sections I.B.2.d. and II.C.1.d. (iii) require existing sources in any ozone nonattainment area to comply with applicable requirements in Regulation Number 7, whereas the other applicability provisions in Regulation Number 7 apply to sources in the 8-hour ozone control area. The 8-hour ozone control area, as defined, does not include the northern portion of Weld County recently included by EPA in the 2015 ozone NAAQS nonattainment area. These provisions in Part A, Sections I. and II. were adopted in 2008 on a state-only basis during the expansion of Regulation Number 7 requirements to sources outside of the historic 1-hour ozone nonattainment area (i.e., the remaining portion of the 8-hour ozone control area under the 75 ppb standard). However, the implementation timeframes in Sections I.B.2.b. and II.C.1.d.(iii) conflict, particularly in relation to the description from the adoption of the provisions that "existing sources that have not been modified are allowed three years from the date of ozone non-attainment designation to implement general RACT requirements."

Therefore, the Commission aligned and clarified the timelines for implementation of applicable requirements in Regulation Number 7 to existing sources in the northern portion of Weld County. Specifically, the Commission adopted revisions to clarify that, broadly, existing sources in northern Weld County must comply with applicable requirements within three years from the date of nonattainment designation (i.e., December 31, 2024), and, more specifically, that existing oil and gas sources must comply beginning February 14, 2023, (i.e., the effective date of adoption) to recognize that many oil and gas operations were already subject to state-only requirements that are the same and/or similar to the SIP requirements. The Commission recognizes that Weld County has challenged EPA's expansion of the 2015 ozone nonattainment area boundary and directs the Division to evaluate the use of the term "northern Weld County" as related to the ozone nonattainment area following the conclusion of the litigation, as necessary. The Commission does not use the term "northern Weld County" to indicate any particular culpability of Weld County as related to the ozone nonattainment classification but selected that term for consistency, clarity for potentially impacted sources, and necessary alignment of implementation timeframes, as discussed above. The Commission also updated the maps and chronology in Appendix A.

Inclusion of state-only provisions in the SIP

As SIP-strengthening measures, the Commission adopted state-only requirements into the SIP. Specifically, the Commission adopted requirements for specific 1,000 hp engines (requirements adopted in 2020), requirements for new well production facilities and natural gas compressor stations to use non-emitting pneumatic controllers (requirements adopted in 2021), and requirements to control emissions from the loadout of hydrocarbon liquids from storage tanks to transport vehicles (requirements adopted in 2019). The engine tables A and B in Part E, Section I.D.4.c were built based on operator engine reporting that began in 2021.

As part of that reporting, operators identified engines fleet-wide that could achieve emission reductions through permitted emissions reductions, installation of additional controls, and engine replacement. The listing of specific engines in Table A does not preclude operators the ability to replace an engine in accordance with an authorized Alternative Operating Scenario (AOS) contained in a permit provided that the replacement engine meets or exceeds the applicable emission standard of the engine being replaced, in accordance with Sections I.D.5.b.(vi)(A) or I.D.5.b.(vi)(B). These requirements for pneumatic controllers, loadout, and specific engines now apply in the SIP for subject owners or operators in the ozone nonattainment area. In providing different compliance schedules for the provisions as included in the SIP as compared to the compliance schedules adopted with as state-only, the Commission does not intend to provide a gap in compliance for owners or operators already complying with the state-only provisions but includes compliance dates for SIP applicability purposes.

Gasoline tank truck testing

The Commission expanded the gasoline tank truck testing provisions to encourage the use of emission controls and support year-round testing. The testing provisions, based on EPA's CTGs, in particular the Control of Volatile Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection Systems (1978), limited testing to October through April. Neither EPA's CTGs nor the required Method 27 limit the calendar time during which testing must occur but both direct that gasoline vapors be purged from the gasoline tank truck before conducting the leak-tightness test to avoid residual gasoline vapors causing testing inconsistencies. Because these provisions are in Colorado's SIP, Colorado must demonstrate that revising the provisions will not cause an interference with Colorado's ability to attain or maintain the NAAQS. See CAA 110(l). The estimated uncontrolled emissions from the testing of 1,800 gasoline tank trucks (tests in 2021) are 80 tpy.

Currently, there are four testing facilities located in the DM/NFR, four located outside the DM/NFR, and two remote testing facilities. Controlling the purged vapors that occur as part of the testing procedure would result in an emissions reduction of 76 tpy, if all testing facilities chose the proposed testing schedule option. To use this year-round testing schedule option, testing facility operators must also control vapor purge emissions that occur for other reasons, such as gasoline tank truck repair, which would result in additional controlled emissions reductions. The Commission also adopted combustion device inspection and monitoring requirements to maintain equipment, improve performance, and reduce emissions. As with a similar provision adopted in 2019, the Commission does not intend that owners or operators should shut-in the combustor for the sole purpose of performing the inspection of the burner tray. Further, owner or operators need only inspect those portions of the burner trays that are visible without shutting-in the combustor. Therefore, the option allowing year-round testing so long as the testing facility operator controls all vapor purge emissions from testing or other purging will reduce emissions and will not interfere with attainment or maintenance of the NAAQS.

Clean-up

The Commission adopted revisions to reflect the intended reporting time frame in Part E, Section I.D.5., correcting the reporting start year from 2022 to 2023. The reporting requirement in Part E Section I.D.5.g. (iii) is for monitoring that did not begin until 2022. Operators are supposed to report monitoring information from the "previous calendar year."

The Commission corrected typographical errors in Part D, Section II.H., specifically in Section II.H.3.c. to correct numbering, in Section II.H.2.f.(i) to correct a citation, and in Section II.H.1.c.(vii) to correct applicability, and in Section II.H.5.c. to correct a numbering error.

Incorporation by Reference

§ 24-4-103(12.5) of the State Administrative Procedure Act allows the Commission to incorporate by reference federal regulations. The criteria of §24-4-103(12.5) are met by including specific information and making the regulations available because repeating the full text of each of the federal regulations incorporated would be unduly cumbersome and inexpedient. To fully comply with these criteria, the Commission included reference dates to rules and reference methods incorporated in Regulation Number 7.

Supplemental Information

Improving air quality in Disproportionately Impacted (DI) Communities is critical and the Commission is committed to advancing Environmental Justice. Though these SIP revisions may not have strategies that limit emissions in DI Communities specifically, the Commission is committed to doing so in future hearings. The ozone reductions garnered by these SIP revisions will improve the health of DI and other communities.

The Commission intends to continue to reduce ozone precursors that are so often emitted in or near DI Communities. These precursors and the ozone they form and other pollutants can have serious health impacts. It is anticipated that EPA will have Environmental Justice Guidance soon and the Commission encourages the Division to use this guidance and the CDPHE's Environmental Justice Action Task Force recommendations, and to continue the work it is doing and to prepare regulations that will improve Air Quality and health in DI Communities. Consistent with its mandates to expeditiously attain the ozone NAAQS, reduce greenhouse gases, and protect disproportionately impacted communities, the Commission expects the Division to work with the Regional Air Quality Council to commence stakeholder processes in 2023 to evaluate ozone reduction strategies, and their benefits and impacts on the Division's other air quality and equity goals, and propose to the Commission for rulemaking those beneficial and cost-effective strategies needed to achieve attainment of the 2008 and 2015 ozone standards.

The stakeholder process should evaluate ozone reduction strategies across a broad range of ozone precursor sources, which should include, at a minimum:

- Prohibitions on gasoline-powered lawn and garden equipment sales, and further incentives for the conversion of gas-powered equipment to electric;
- Additional non-road equipment reduction strategies;
- Building and appliance efficiency standards;
- Residential auto maintenance incentives;
- Commercial diesel best practices initiatives;
- Advanced Clean Cars II standards;
- Strengthening the vehicle inspection and maintenance program;
- Mobile source credits as part of nonattainment new source review;
- Additional/permanent funding for VMT reducing strategies such as zero-fare transit, increased transit services, and bicycle and walking infrastructure;
- Emission reduction approaches for indirect sources;
- Additional industrial source emission reduction requirements, such as flaring minimization requirements at applicable sources, episodic and seasonal restrictions on industrial and commercial activities, oil and gas pre-production activities, rules to reduce emissions from gas-fired reciprocating internal combustion engines (RICE) in the oil and gas sector, requiring emission offsets or aggregation of wellhead and production facility equipment when permitting oil and gas sector minor sources, and zero-emitting retrofits for all existing pneumatic devices;
- and any other measures that the Division determines would assist in attainment of the ozone NAAQS.

In the case of the Colorado Clean Cars rule, the Commission expects that the Division will make a proposal consistent with the State's 2023 Electric Vehicle Plan. Per its 2019 resolution, the Commission expects the Division to report on the impacts and benefits of proposed ozone reduction strategies on achieving the state's nitrogen deposition reduction goals in Rocky Mountain National Park as part of future ozone reduction rulemakings.

Additional Considerations

Colorado must revise Colorado's ozone SIP to address the severe and moderate ozone nonattainment area requirements. The CAA does not expressly address all of the provisions adopted by the Commission. Rather, federal law establishes the ozone NAAQS and requires Colorado to develop a SIP adequate to attain the NAAQS. Therefore, the Commission adopted certain revisions to Regulation Number 7 to satisfy Colorado's nonattainment area obligations. These revisions do not exceed or differ from the federal act due to state flexibility in determining what control strategies to implement to reduce emissions. However, where the proposal may differ from federal rules under the federal act, in accordance with § 25-7-110.5(5)(b), CRS, the Commission determines:

- (I) The revisions to Regulation Number 7 address process heaters, boilers, turbines, engines, ceramic kilns, dryers, furnaces, wood coating, solvent use, industrial waste, bakery operations, poultry waste operations, digital printing, gasoline tank trucks, automotive materials, and the oil and gas sector. NSPS OOOO, NSPS OOOOa, NSPS Kb, NSPS KKK, NSPS IIII, NSPS JJJJ, NSPS GG, MACT KK, MACT DDDDD, MACT JJJJJJ, MACT BBBBBBB, MACT CCCCCC, MACT ZZZZ, MACT YYYYY, MACT HH, MACT HHH, and 40 CFR Part 59 Subpart B may also apply to and the above listed equipment and operations. However, the revisions to Regulation Number 7 apply on a broader basis.
- (II) The federal rules discussed in (I) are primarily technology-based in that they largely prescribe the use of specific technologies or work practices to comply.
- (III) The CAA establishes the 2008 and 2015 NAAQS and requires Colorado to develop SIP revisions that will ensure attainment of the NAAQS. The ozone NAAQS was not determined taking into account concerns unique to Colorado. Similarly, EPA develops NSPS or NESHAP considering national information and data, not Colorado specific issues or concerns. In addition, Colorado cannot rely exclusively on a federally enforceable permit or federally enforceable NSPS or NESHAP to satisfy Colorado's ozone nonattainment area RACT obligations. Instead, Colorado can adopt applicable provisions into its SIP directly, as the Commission has done here.
- (IV) In addition to the 2008 NAAQS, Colorado must also comply with the lower 2015 ozone NAAQS. These current revisions may improve the ability of the regulated community to comply with new requirements needed to attain the lower NAAQS insofar as RACT analyses and efforts conducted to support the revisions adopted by the Commission may prevent or reduce the need to conduct additional RACT analyses for the more stringent NAAQS.
- (V) EPA has established Colorado's SIP-RACT implementation deadlines. There is no timing issue that might justify changing the time frame for implementation of federal requirements.
- (VI) The revisions to Regulation Number 7 strengthen Colorado's SIP. These sections currently address emissions from combustion equipment, wood coating, solvent use, industrial waste, bakery operations, poultry waste operations, digital printing, gasoline tank trucks, automotive materials, and the oil and gas sector in a cost-effective manner, allowing for continued growth of Colorado's industry.
- (VII) The revisions to Regulation Number 7 establish reasonable equity for owners and operators subject to these rules by providing the same standards for similarly situated and sized sources.

- (VIII) If EPA does not approve Colorado's SIP, EPA may promulgate a Federal Implementation Plan; thus potentially determining RACT for Colorado's sources. This outcome may subject others to increased costs.
- (IX) Where necessary, the revisions to Regulation Number 7 include minimal monitoring, recordkeeping, and reporting requirements that correlate, where possible, to similar federal or state requirements.
- (X) Demonstrated technology is available to comply with the revisions to Regulation Number 7. Some of the revisions expand upon requirements already applicable. The revisions concerning major sources of NO_x generally reflect current emission controls and work practices.
- (XI) As set forth in the Economic Impact Analysis, the revisions to Regulation Number 7 will reduce emissions in a cost-effective manner.
- (XII) Alternative rules could also provide reductions in ozone, VOC, and NO_x to help to attain the NAAQS. However, a no action alternative would very likely result in an unapprovable SIP.

As part of adopting the revisions to Regulation Number 7, the Commission has taken into consideration each of the factors set forth in CRS § 25-7-109(1)(b).

Colorado must revise Colorado's ozone SIP to address the ozone nonattainment area requirements. However, to the extent that CRS § 25-7-110.8 requirements apply to this rulemaking, and after considering all the information in the record, the Commission hereby makes the determination that:

- (I) These rules are based upon reasonably available, validated, reviewed, and sound scientific methodologies, and the Commission has considered all information submitted by interested parties.
- (II) Evidence in the record supports the finding that the rules shall result in a demonstrable reduction of VOCs and NO_x emissions.
- (III) Evidence in the record supports the finding that the rules shall bring about reductions in risks to human health and the environment that justify the costs to implement and comply with the rules.
- (IV) The rules are the most cost-effective to achieve the necessary and desired results, provide the regulated community flexibility, and achieve the necessary reduction in air pollution.
- (V) The rule will maximize the air quality benefits of regulation in the most cost-effective manner.

AA. April 20, 2023

This Statement of Basis, Specific Statutory Authority, and Purpose complies with the requirements of the State Administrative Procedure Act, § 24-4-101, C.R.S., et seq., the Colorado Air Pollution Prevention and Control Act, § 25-7-101, C.R.S., et seq., and the Air Quality Control Commission's (Commission) Procedural Rules, 5 C.C.R. §1001-1.

Basis

To improve the readability and usability of Regulation Number 7 and Regulation Number 22, the Commission adopted revisions restructuring and reorganizing the parts and sections.

Specific Statutory Authority

The Colorado Air Pollution Prevention and Control Act, § 25-7-101, C.R.S., et seq. (the State Air Act or the Act), specifically § 25-7-103.3, directs rule-making agencies, such as the Commission, to review their rules and consider whether the rule is necessary; whether the rule overlaps or duplicates other rules of the agency or with other federal, state, or local government rules; whether the rule is written in plain language and is easy to understand; whether the rule has achieved the desired intent and whether more or less regulation is necessary; whether the rule can be amended to give more flexibility, reduce regulatory burdens, or reduce unnecessary paperwork or steps while maintaining its benefits; whether the rule is implemented in an efficient and effective manner, including the requirements for the issuance of permits and licenses; whether a cost-benefit analysis was performed by the applicable rule-making agency; and whether the rule is adequate for the protection of the safety, health, and welfare of the state or its residents. Based on this review, the rule-making agency will determine whether the existing rules should be continued in their current form, amended, or repealed.

Purpose

The following section sets forth the Commission's purpose in adopting the revisions to Regulation Number 7. The Commission reorganized Regulation Number 7 into four regulations: Part B became Regulation Number 24; Part C became Regulation Number 25; Part D remained in Regulation Number 7; and Part E became Regulation Number 26. The upstream oil and gas intensity and midstream combustion program provisions currently in Regulation Number 22 moved to Regulation Number 7. The manufacturing sector greenhouse gas provisions in Regulation Number 22 became a new Regulation Number 27.

To assist in tracking the history of the regulatory revisions, associated statements of basis and purpose, and restructured location, the Commission provides the following tracking table.

Year of rule adoption	Date of rule adoption	Summary of rule(s) adopted	Regulation Number 7 Section (pre-2019 numbering)	Regulation Number 7 Section (numbering as of 12.2022)	Rule & Section (as of 4.2023)
1995	Dec. 21	Clarify substances that are negligibly reactive VOCs.	Section II.B.	Part A, Section II.B.	Regulations 7 and 24-26, Part A
1996	Mar. 21	Revisions related to the maintenance demonstration.	Sections I.A.1. through I.A.4.; II.D.; II.E.	Part A, Sections I.A.1. through I.A.4.; II.D.; II.E.	Regulations 7 and 24-26, Part A
1996	Nov. 21	Updated NRVOC list. Removed control of VOC emissions from dry cleaning facilities using perchloroethylene.	Section XII.	NA	NA
1998	Oct. 15	Revisions specific to Gates Rubber Company.	Section II.F.	NA	Regulation 24-25, Part A
2001	Jan. 11	Correct discrepancies in posted versus adopted provisions.	Sections III.C.; IX.L.2.c.(1); X.D.2. through XI.A.3.	Part B, Section I.; Part C, Section I.; Part C, Sections II. through III.	Regulation 24, Part B; Regulation 25, Part B (fkna Part C)
2003	Nov. 20	Repealed provisions establishing a procedure for granting exemptions for de minimis sources and for approving alternative compliance plans.	Sections I.A.2. through I.A.4.; II.D.; II.E.	Part A, Sections I.A.1. through I.A.4.; II.D.; II.E.	Regulations 7 and 24-26, Part A
2004	Mar. 12	Revisions adopted in conjunction with the	Sections I.A.; I.B.;	Part A, Section	Regulations 7

Year of rule adoption	Date of rule adoption	Summary of rule(s) adopted	Regulation Number 7 Section (pre-2019 numbering)	Regulation Number 7 Section (numbering as of 12.2022)	Rule & Section (as of 4.2023)
		early action compact ozone action plan – control of emissions from condensate operation at oil and gas facilities, emissions from internal combustion engines, emissions from gas processing plants, and emissions from oil and gas operations dehydrators.	XII.; XVI.	I.A.; Part A, Section I.B.; Part D, Section I.; Part E, Section I.	and 24-26, Part A
2004	Dec. 16	Revisions adopted in response to EPA comments (re practical enforceability) on the ozone action plan adopted 3/2004.	Sections I.A.; II.A.; XII.; XVI.;	Part A, Section I.A.; Part A, Section II.A.; Part D, Section I.; Part E, Section I.	Regulations 7 and 24-26, Part A
2006	Dec. 17	Expanding oil and gas condensate tank emission controls.	Section XII.	Part D, Section I.	Regulation Number 7, Part B (fkna Part D)
2006	Dec. 17	Reduce emissions from oil and gas operations and natural gas fired engines.	Sections I.A.1.b.; XVII.	Part A, Section I.A.; Part D., Section II. & Part E. Section I. (for engines)	Regulation Number 7, Part A and Part B (fkna Part D); Regulation 26, Part A and Part B (fkna Part E)
2008	Dec. 12	Expand VOC RACT requirements for 100 tpy sources and clarify how RACT requirements in Regulation Numbers 3 and 7 interact in the ozone nonattainment area. Make typographical and formatting changes. Revise oil and gas condensate tank and pneumatic controller requirements.	Title; Sections I.; II.; VI. through XIII.; XVII.; XVIII.; and Appendices A through F	Part A, Section I.; Part A, Section II.; Part B, Sections IV. through VI. & Part C, Sections I. through IV. & Part D, Section I.; Part D, Section II. and Part E, Section I. (for engines); Part D, Section III.; Part A, Appendix A. & Part B, Appendices B and C & Part C, Appendices D and E (formerly Appendix F)	Regulation 24, Part B; Regulation 25, Part B (fkna Part C); Regulation Number 7, Part B (fkna Part D); Regulation 26, Part B (fkna Part E)
2011	Jan. 7	Include engine requirements in the Regional Haze SIP.	Outline; Sections I.; XVII.	Part A, Section I.; Part E, Section I.	Regulation 26, Part B (fkna Part E)
2012	Dec. 20	Address EPA comments on the June 2009 submittal. Revise state-only requirements for consistency.	Sections II.; XII.; XVII.	Part A, Section II.; Part D, Section I.; Part D, Section II.	Regulation Number 7, Part B (fkna Part D)
2014	Feb. 23	Adopt additional oil and gas emission reduction requirements – auto-igniters, expand condensate tank controls, limit storage tank venting, expand dehydrator control, establish leak detection and repair program, limit venting during well maintenance and liquids unloading, expand pneumatic controller requirements.	Sections II.; XVII.; XVIII.	Part A, Section II.; Part D, Section II.; Part D, Section III.	Regulation Number 7, Part B (fkna Part D)

Year of rule adoption	Date of rule adoption	Summary of rule(s) adopted	Regulation Number 7 Section (pre-2019 numbering)	Regulation Number 7 Section (numbering as of 12.2022)	Rule & Section (as of 4.2023)
2016	Nov. 17	Adopt RACT requirements for industrial cleaning solvents, lithographic and letterpress printing, and specific major sources. Including existing combustion device auto-igniter and storage tank inspection requirements in the SIP. Adopting major source combustion equipment combustion process adjustment requirements and incorporate by reference NSPS and NESHAP for specific major sources.	Sections I.; X.; XII.; XIII.; XVI.; XIX.	Part A, Section I.; Part C, Section II.; Part D, Section I.; Part C, Section IV.; Part C, Section V.; Part E, Section III.	Regulation 25, Part B (fkna Part C); Regulation Number 7, Part B (fkna Part D); Regulation 26, Part B (fkna Part E)
2017	Nov. 16	Adopt provisions based on recommendations in EPA's Oil and Gas Control Techniques Guideline. Revise state-only requirements for consistency.	Sections II.; XII.; XVII.; XVIII.	Part A, Section II.; Part D, Section I.; Part D, Section II.; Part D, Section III.	Regulation Number 7, Part B (fkna Part D)
2018	July 19	Adopt requirements for existing major source boilers, turbines, lightweight aggregate kilns, glass melting furnaces, engines.	Sections XVI.; XIX.	Part E, Section II., Part E, Section III.	Regulation 26, Part B (fkna Part E)
2018	Nov. 15	Adopt requirements for major source breweries and wood furniture manufacturing. Address EPA concerns with requirements for industrial cleaning solvents, metal furniture surface coating, and miscellaneous metal surface coating. Updated incorporation by reference dates.	Sections I.; II.; VI.; VIII.; IX.; X.; XII.; XIII.; XVI.; XVII.; XIX.; XX.; XXI.	Part A, Section I.; Part A, Section II.; Part B, Section IV.; Part B, Section VI.; Part C, Section I.; Part C, Section X.; Part D, Section I.; Part C, Section IV.; Part C, Section V.; Part D, Section II.; Part E, Section III.; Part E, Section IV. Part F	Regulation 24, Part B; Regulation 25, Part B (fkna Part C); Regulation Number 7, Part B (fkna Part D); Regulation 26, Part B (fkna Part E); Regulation 23 (fkna Part F)
2019	Dec. 19	Reorganized into Parts A through F. Replaced the SIP system-wide condensate tank control program with a fixed threshold storage tank control program. Increased state-only, state-wide storage tank controls. Adopted oil and gas storage tank measurement system, hydrocarbon liquids loadout, leak detection and repair, well plugging, and pneumatic controller requirements. Adopted an oil and gas transmission and storage segment methane intensity program. Adopted an annual oil and gas inventory program. Expanded SIP requirements to 50 tpy sources. Aligned gasoline tank truck testing requirements with federal requirements as SIP clean-up.	Sections I. through XX. and Appendices A through F	(see reorganization cross walk)	
2020	Sept. 23	Adopted requirements for natural gas fired 1,000 horsepower engines. Adopted flowback vessel control requirements and pre- and early-production monitoring requirements. Expanded hydrocarbon liquids loadout requirements to class II disposal well facilities.		Part D, Sections II.; IV.; V.; VI.; Part E, Section I.	Regulation Number 7, Part B (fkna Part D); Regulation 26, Part B (fkna Part E)

Year of rule adoption	Date of rule adoption	Summary of rule(s) adopted	Regulation Number 7 Section (pre-2019 numbering)	Regulation Number 7 Section (numbering as of 12.2022)	Rule & Section (as of 4.2023)
2020	Dec. 18	Adopted requirements for major source foam manufacturing, boilers, turbines, landfill and biogas fired engines, and wood surface coating.		Part D, Section II.; Part E, Sections II.; IV.; V.	Regulation Number 7, Part B (fkna Part D); Regulation 26, Part B (fkna Part E)
2021	Feb. 18	Adopted non-emitting pneumatic controller requirements for new facilities and existing pneumatic controller retrofit requirements for existing facilities.		Part D, Section III.	Regulation Number 7, Part B (fkna Part D)
2021	July 16	Adopted requirements for metal parts surface coating and major source process heaters.		Part C, Section I.; Part D, Section III.; Part E, Section II.	Regulation 25, Part B (fkna Part C); Regulation Number 7, Part B (fkna Part D); Regulation 26, Part B (fkna Part E)
2021	Dec. 17	Adopted SIP revisions to address EPA concerns with the EPA Oil and Gas CTG. Adopted oil and gas combustion device performance testing requirements. Expanded reciprocating compressor rod packing, leak detection and repair, and pneumatic controller requirements at natural gas processing plants. Expanded leak detection and repair, separator, and well maintenance requirements. Adopted pigging and blowdown requirements.		Part D, Sections I., II., III., V., VI.	Regulation Number 7, Part B (fkna Part D)
2022	Dec. 15	Adopted requirements for major source combustion equipment, wood coating, solvent use, bakery operation, digital printing, poultry waste processing, oil stabilization facilities, class II injection well facilities, and industrial waste; included state only provisions as SIP strengthening measures; clarified the applicability of requirements to newly classified ozone nonattainment areas; included requirements for motor vehicle materials and automotive coatings; expanded gasoline tank truck testing requirements.		Part E, Sections I., II., III., VI., VII., and VIII., Part C., Sections I., II., and IV., and Part D, Section II.; Part D, Sections II., ; Part A, Sections I. and II.; Part C, Section I.; and Part B, Section IV.	Regulation 24, Part B (fkna Part B); Regulation 25, Part B (fkna Part C); Regulation Number 7, Part B (fkna Part D); Regulation 26, Part B (fkna Part E)

The Commission also made typographical, grammatical, and formatting corrections throughout the regulations.

Incorporation by Reference

The Commission will update regulatory references as needed as opportunities arrive.

Additional Considerations

These revisions are administrative in nature and, therefore, do not exceed or differ from the requirement of the federal act or rules. Therefore, § 25-7-110.5(5)(a) does not apply.

Findings of Fact

To the extent that § 25-7-110.8, C.R.S., requirements apply to this rulemaking, and after considering all the information in the record, the Commission hereby makes the determination that:

- (I) These rules are based upon reasonably available, validated, reviewed, and sound scientific methodologies, and the Commission has considered all information submitted by interested parties.
- (II) Evidence in the record supports the finding that the rules shall result in a demonstrable reduction of greenhouse gas and VOC emissions.
- (III) Evidence in the record supports the finding that the rules shall bring about reductions in risks to human health and the environment that justify the costs to implement and comply with the rules.
- (IV) The rules are the most cost-effective alternative to achieve the necessary reduction in air pollution and provide the regulated entity flexibility.
- (V) The selected regulatory alternative will maximize the air quality benefits of regulation in the most cost-effective manner.

BB. July 20, 2023 (Part B Sections II, V, and VIII)

This Statement of Basis, Specific Statutory Authority, and Purpose complies with the requirements of the State Administrative Procedure Act, § 24-4-101, C.R.S., et seq., the Colorado Air Pollution Prevention and Control Act, § 25-7-101, C.R.S., et seq., and the Air Quality Control Commission's (Commission) Procedural Rules, 5 C.C.R. §1001-1.

Basis

During the 2019 legislative session, Colorado's General Assembly adopted House Bill 19-1261 (HB 19-1261), setting statewide greenhouse gas (GHG) reduction goals. The General Assembly declared in HB 19-1261 that "climate change adversely affects Colorado's economy, air quality and public health, ecosystems, natural resources, and quality of life[.]" acknowledged that "Colorado is already experiencing harmful climate impacts[.]" and that "many of these impacts disproportionately affect" certain disadvantaged communities. The goals set in HB 19-1261 seek a 26% reduction of statewide GHG emissions by 2025; 50% reduction by 2030; and 90% reduction by 2050 as compared to 2005 levels. The GHG Pollution Reduction Roadmap ("GHG Roadmap") developed by the Colorado Energy Office and CDPHE identifies the largest contributors to state GHG emissions and quantifies the baselines from which these reduction percentages are to be estimated.

In December 2021, the Commission adopted a revision to this regulation that established greenhouse gas intensity requirements for upstream operators and required owners or operators of well production facilities to submit greenhouse gas intensity plans. The primary purpose of these plans is for owners or operators to demonstrate to the Division how they intend to meet the 2025, 2027, and 2030 greenhouse gas intensity targets in Sections VIII.B.2. through VIII.B.4. In Section VIII.F., the Commission directed the Division to develop a mechanism to track progress towards meeting the state's GHG reduction goals and to evaluate compliance with the greenhouse gas intensity targets and new facility intensity targets in Sections VIII.B. and VIII.C. The Commission determined that it was advisable to give the Division time in 2021 and 2022 (1) to evaluate the annual emission reports submitted in 2021 and 2022, (2) to evaluate different calculation and emission quantification methodologies for different emitting activities and equipment, and (3) to consider the impact and results of the aerial and ground-based survey work being conducted by the Division (and contractors) in 2021 (because this data was not fully available until the spring of 2022) as well as other relevant surveys.

The Commission directed the Division to, by 2023, propose a verification plan after considering the current status of oil and gas GHG emissions, based on Regulation Number 7 reporting and top-down monitoring results, production increases or decreases based on data reported to the OGCC, the aerial and ground-based survey work, and other important considerations, such as the availability, reliability, and cost-effectiveness of monitoring techniques as appropriate. In this rulemaking action, the Commission has adopted a comprehensive GHG intensity verification program for upstream operators that allows for operator flexibility and the ability to adapt to new technologies as they emerge.

Specific Statutory Authority

The Colorado Air Pollution Prevention and Control Act, § 25-7-101, C.R.S., et seq. (the State Air Act or the Act), specifically § 25-7-105(1), directs the Commission to promulgate such rules and regulations as are consistent with the legislative declaration set forth in § 25-7-102 and that are necessary for the proper implementation and administration of Article 7. The Act provides the Commission broad authority to regulate air pollutants, including GHG and its constituent gases (particularly carbon dioxide, methane, and nitrous oxide).

§ 25-7-106 provides the Commission maximum flexibility in developing an effective air quality program and promulgating such combination of regulations as may be necessary or desirable to carry out that program. § 25-7-106 also authorizes the Commission to promulgate emission control regulations applicable to the entire state, specified areas or zones, or a specified class of pollution. § 25-7-106(6) further authorizes the Commission to require owners and operators of any air pollution source to monitor, record, and report information. § 25-7-109(10) directs the Commission to adopt emission control regulations to minimize emissions of methane, other hydrocarbons, VOC, and NO_x from oil and gas operations.

Pursuant to HB 21-1266, the Commission must adopt regulations to ensure that the state meets its greenhouse gas reduction targets for the oil and gas sector in the GHG Roadmap (36% by 2025 and 60% by 2030). § 25-7-105(1)(e)(XII), C.R.S. The Commission must also ensure that industrial sector emissions (including those from oil and gas fuel combustion equipment) are reduced by 20% from the 2015 baseline by 2030. These revisions ensure that the state meets its statutory goals. These revisions to Regulation Number 22 will, taking into account other relevant laws and rules (including the revisions to Regulation Number 7 adopted as part of this rulemaking action), as well as voluntary actions taken by local communities and the private sector, achieve the state's GHG reduction goals through 2030 for the oil and gas industry.

Purpose

The following section sets forth the Commission's purpose in adopting the revisions to Regulation Number 7, and includes the technological and scientific rationale for the adoption of the revisions.

Section II, Pressure Actuator System

The Commission adopted an acceptable alternative to flow meters, a pressure actuator system, for monitoring enclosed combustion devices to confirm that the enclosed combustion device is being operated appropriately. A pressure actuator system monitors pressure and provides an operator more control of their vapor control system to ensure it is operating within design parameters. This system was discussed as an alternative in 2021, but the concept was not clearly understood by the Division or operators at that time. The Division has since approved several proposals that use pressure actuator systems as an alternative to flow meters (as allowed by II.B.2.g.(iii)(C)). The Commission intends that those approvals remain valid; however, to comply with Section II.B.2.g. an owner or operator may choose to notify the Division that it rescinds its approved proposal and that it instead will adhere to the pressure actuator system requirements of II.B.2.g.

Section V, Oil and Natural Gas Annual Emission Inventory Report (ONGAEIR)

The Commission has adopted revisions to the annual reporting requirement for oil and gas owners and operators in Section V to support GHG intensity verification and reporting. The Commission has also adopted a revised requirement for the owners or operators of oil and natural gas operations and equipment at or upstream of a natural gas processing plant and class II disposal well facilities that are not subject to reporting under Section IV. Such owners and operators are now required to submit their annual emission reporting (ONGAEIR) with emissions identified by month beginning with calendar year 2024 reporting, which will be due by June 30, 2025.

Section VIII.A, Definitions

The Commission adopted new definitions in Section VIII.A for “Certified third-party auditor,” “Measurement informed inventory,” “Direct measurement,” “Oil and Natural Gas Annual Emissions Inventory Report (ONGAEIR),” “Parametric measurement,” “Measurement strategy” and “State default intensity verification factor” to clarify the terms as used in Section VIII.F.

Section VIII.F. and VIII.G., GHG Intensity Verification

In December of 2021, the Commission adopted language in Section VIII.F.1. that directed the Division to develop a mechanism by 2023 to track progress towards meeting the state’s GHG reduction goals and to evaluate compliance with the greenhouse gas intensity targets and new facility intensity targets in Sections VIII.B. and VIII.C. In this action, the Commission repealed Section VIII.F.1. and replaced that section with the new Sections VIII.F.2 – 5 and VIII.G. The new Sections VIII.F.2- 5 and VIII.G. achieve the directives given in the December 2021 rulemaking.

In Section VIII.F.2 - 3., the Commission adopted requirements for methodologies and strategies for operators to demonstrate compliance or verify their company-wide and new facility GHG intensity. Subject owners and operators must use a measurement-informed inventory relying upon the Oil and Natural Gas Annual Emission Inventory Reports (ONGAEIR) required in Section V to demonstrate that the targets in Sections VIII.B and C are being met. The inventory must also take into account quantification of emissions from regional, local, or point source monitoring (emission or parametric measurement monitoring). The Commission intends that monitoring be used to quantify methane in the creation of a measurement-informed inventory.

For calendar years 2023 and 2024, operators of new facilities will use their ONGAEIR alone to calculate intensity to compare against new facility intensity standards. For subsequent calendar years, operators of new facilities will be required to determine intensity in accordance with the methods to create a measurement-informed inventory.

To create a measurement-informed inventory, operators will either:

- apply a state default intensity verification factor to their ONGAEIR methane emissions, or
- follow an operator-specific program, subject to Division approval.

Section VIII.F.3.a., State Default Intensity Verification Factor

The state default intensity verification factor must be developed by the Division annually, and made available to operators by December 31 of the previous calendar year to which the state default intensity verification factor will be applied. The Commission directs the Division to include aerial and ground based emission monitoring, as well as other appropriate monitoring, to create the state default intensity verification factor. The state default intensity verification factor may be statewide, regional, basin-wide, or site specific, and the methodology may change year to year with appropriate review and public comment.

The Commission intends for the Division to strive for general consistency in developing this factor, while still keeping up with, and making necessary changes in response to, the evolving technology landscape for emissions detection and measurement. The Commission also directs the Division to make all data and materials used to create the state default intensity verification factor publicly available, and include a summary report of the methodology and calculations annually. To the extent possible, emissions measurements should be compared against emission reporting for the same time period, and any assumptions about longevity, scaling, and emission distribution must be clearly identified in the report.

Section VIII.F.3.b., Company-wide GHG Intensity Verification Program

The minimum requirements of the operator-specific program are laid out in Section VIII.F.3.b. The operator-specific program includes two important elements to verify that the company's GHG emission reporting meet the requirements for a measurement-informed inventory: 1) a measurement strategy and 2) a third-party audit.

1) Measurement Strategy

The measurement strategy may be developed by the Division or, beginning in 2027, by the intensity operator. The Commission intends that the measurement strategy addresses emissions from all types of facilities, of various sizes, of various frequencies, and across the day and year. The measurement strategy must explain the considerations and reasoning for the operator's selections. To fully inform emissions calculations from all facilities, the number of facilities monitored must be sufficient to represent that company's portfolio of well production facility types. Well production facilities can be characterized by size, stages of separation, storage tank type, age, and other distinguishing factors. Further, emissions vary in both size and frequency. Some emissions are very small but consistent, while others are large and intermittent or infrequent. The measurement strategy must account for these varying conditions. Finally, the measurement strategy must consider opportunities for data collection at different times of day and during different seasons. The measurement strategy must include direct measurement and may also include parametric measurement. The measurement strategy should be supported by other inputs, if needed, and the measurement strategy (in conjunction with ONGAEIR) should demonstrate with sufficient precision that the operator is accurately calculating its required intensity. Such other inputs could include parametric measurement, statistical analysis of direct measurements to extrapolate the results of sampled measurements, and reconciliation between inventory-based emissions and measured emissions.

Direct Measurement

The Commission intends that a variety of previously validated monitoring equipment and methodologies may be used for the measurement strategy, but all measurement strategies must utilize direct measurement at the site-level. By "site-level," the Commission means that direct methane emission measurements must be able to be attributed to a specific site, stationary source, or facility. Technologies that are designed to measure methane emissions from various emission points at a site or technologies that are designed to measure the overall site-wide methane emissions from a site are acceptable.

To ensure that the direct measurement technologies and methodologies are "fit for purpose, capture a sufficient portion of expected emissions, and be validated with appropriate testing", the Division or the operator must consider the uncertainty of the method, the minimum detection level at a probability of detection of at least 90%, the rigorosity of the testing, and the frequency of the monitoring.

Parametric Measurement

Where parametric measurement is utilized, the measurement strategy must detail how the parametric data informs emission calculations. For example, if a pressure actuator and temperature sensor is used to monitor an enclosed combustion device, the measurement strategy must outline how the readings will impact the emissions calculations for control efficiency or downtime.

The Commission has indicated in Section VIII.F.3.b.(i)(B) that the Division may consider other reasonable and necessary monitoring considerations in the development of a measurement strategy. The Commission intends that any such additional monitoring considerations (i) be necessary to ensure development of a measurement-informed inventory, (ii) consider the commercial viability and availability of the proposed monitoring technology or consideration, and (iii) be reasonably tied to the purposes set forth by this Commission in adopting these rules.

The Commission understands that at this time, there is no single or group of monitoring technologies that will accurately quantify or detect all emissions all of the time. The Commission intends that the measurement strategy utilize currently available technologies to inform emissions, be reviewed annually, and be updated as new and validated technologies and methodologies arise and where the operator determines measurement strategy changes will result in more accurate and comprehensive understanding of greenhouse gas emissions.

The Commission intends for the Division to complete, for each year from 2026 through 2031, a comprehensive review of operators' measurement strategy and implementation of the measurement strategy for the preceding calendar year. The comprehensive review will aid the Division in assessing prior assumptions about available technology, deployment of that technology, methods of reconciliation, and other aspects of the measurement strategy and implementation, and determining whether these aspects should continue to be utilized or should be modified. The Commission intends for the Division to update the GHG Intensity Verification Protocol document as necessary in response to the findings of the Division's comprehensive review.

2) Third-Party Audit

The Commission intends for operators to have a certified third party auditor complete a review of the operator's ONGAEIR reporting. The certified third-party auditor must have no financial incentive to that operator, must have expertise in emission calculation and developing emission inventories, and have stringent processes in place to retain integrity, transparency, and trust.

In Section VIII.F.3.b.(iii), the Commission intends that the Division have the option to require an operator to revise their operator-specific program or deny the operator-specific program and require the operator to utilize the state default intensity verification factor. The Commission expects that this would only apply to an operator who has significantly failed to comply with the operator-specific program (the measurement strategy, the audit or both) such that they have not developed a measurement-informed inventory that can be relied upon to determine compliance with the intensity standard. Less significant errors or corrections can be addressed through the Division's existing authorities.

Section VIII.F.4., GHG Intensity Verification Protocol

In Section VIII.F.2.c., the Commission adopted provisions that direct the Division to create and maintain a protocol for intensity verification. This Intensity Verification Protocol will detail how the Division will update the state default intensity verification factor(s) and how operators must develop their operator-specific programs.

The Intensity Verification Protocol must include the measurement strategies developed by the Division, the methodology to calculate the state default intensity verification factor, guidance to operators in developing their own measurement strategies (for calendar year 2027 through 2030), a list of expectations for certified third party auditors, and guidance on reporting requirements as designated in Section VIII.G. During the development of the protocol and any modifications to it, the Commission intends for the Division to collaborate with all stakeholders, including local governments, regarding the methodologies used to calculate default intensity verification factor(s).

The Commission is aware of several Measurement, Reporting, Verification (MRV) frameworks that would support a measurement-informed inventory for methane, including the United Nations Environment Programme Oil and Gas Methane Partnership 2.0 (OGMP 2.0); MiQ, GTI Veritas; CleanConnect ProveZero; Project Canary/Trustwell; Quantification, Monitoring, Reporting and Verification (QMRV); and others. The Commission intends for the division to evaluate these and other newly developed programs to identify how they will support the requirements of the operator-specific intensity verification program.

The Commission expects that a final Version 1.0 of the Intensity Verification Protocol will be completed by December 31, 2023, but no later than June 30, 2024. The Commission intends for the Division to continue engagement with stakeholders in the development and finalization of Version 1.0 of the Intensity Verification Protocol.

Beginning in 2025, the Commission intends for the Division to review the protocol annually and identify revisions, if needed. Any future revisions to the protocol must include public review and comment, and should be published by June 30 of the calendar year preceding the effectiveness of the protocol (e.g. by June 30, 2025 for reporting year 2026).

Section VIII.G., Reporting

The Commission adopted new reporting requirements and consolidated existing annual verifications into Section VIII.G. The Commission requires that intensity operators intending to follow an operator-specific program provide a summary of their measurement strategy to the Division three months before the start of the calendar year for which they intend to use the strategy. This summary should include the information outlined in the Intensity Verification Protocol developed by the Division, such as the types of technologies being used, the key specifications for those technologies (i.e., the minimum detection level at 90% probability of detection), the anticipated frequency of monitoring, and a description of how the results from the measurements conducted under the strategy will be incorporated into ONGAEIR.

The Commission also expanded on the annual verification requirement to include reporting of the company-wide and new facility greenhouse gas intensity and whether an intensity operator elected to use the state default intensity verification factor or used an operator-specific program to create a measurement-informed inventory. The Commission also clarified that the annual verifications due in 2024 and 2025 only need to include the relevant information for new facilities subject to new facility intensity requirements in 2023 and 2024.

The Commission created a new requirement that where an intensity operator does not meet the required intensity standard, the intensity operator must either revise or supplement the most recently submitted greenhouse gas intensity plan from Section VIII.E. and submit the updated plan to the Division. The intensity operator must include planning on how they will bring the intensity down to the required standard in the following year and how they will make up the difference in emissions that should have been reduced had they met the intensity standard in the previous year.

The Commission finally created new reporting requirements for those intensity operators following operator-specific programs to attain a measurement-informed inventory. The intensity operators following operator-specific programs will be required to submit their complete measurement strategy and an evaluation of the implementation of the strategy by June 30 of the year following the calendar year in which the measurement strategy was implemented. Further, intensity operators will be required to submit the reports from the certified third-party auditor as well as a summary of any changes the intensity operator made to ONGAEIR as a result of the audit.

GHG Roadmap Progress

The Commission intends for the Division to publish the methodology the Division will use to evaluate total greenhouse gas emissions relative to the applicable baseline and progress towards statewide greenhouse gas emission reduction goals for oil and gas emissions. This methodology must include statewide, regional, or local measurement and quantification of methane emissions. The Commission intends for the Division to engage with stakeholders prior to publishing this methodology.

Evaluation of Rule Implementation

The Commission recognizes that, in future years, after the state has had time to assess the implementation of the verification program it may be appropriate to revise the regulatory requirements of Regulation Number 7, Part B, Sections V, VIII.F., and VIII.G. Along with other elements the Division typically reviews during rule implementation, beginning in 2025, the Division should review the timing of reporting and auditing requirements to ensure that the learning cycle built into the rule is sufficiently informing the program. If the Division's ongoing evaluation indicates that a rulemaking is warranted to ensure that the verification program sufficiently informs compliance with the intensity standards, the Division should return to the Commission with a revised rule proposal for consideration at that time. The Commission expects that, leading up to 2025 and beyond, the Division will continue to evaluate and improve the state's data management and processing systems.

Additional Considerations

The following are additional findings of the Commission made in accordance with the Act:

§ 25-7-110.5(5)(b), C.R.S.

As these revisions exceed and may differ from the federal rules under the federal act, in accordance with § 25-7-110.5(5)(b), C.R.S., the Commission determines:

- (I) Any federal requirements that are applicable to this situation with a commentary on those requirements;
- (II) Whether the applicable federal requirements are performance-based or technology-based and whether there is any flexibility in those requirements, and if not, why not;
- (III) Whether the applicable federal requirements specifically address the issues that are of concern to Colorado and whether data or information that would reasonably reflect Colorado's concern and situation was considered in the federal process that established the federal requirements;

There are federal requirements that seek to reduce greenhouse gas from oil and gas operations, though those requirements are separate and distinct from the requirements set forth in Part B, Sections II, V, and VIII, which were addressed in this rulemaking. The Commission's revisions address Colorado-specific requirements and needs, like those of HB 19-1261 and HB 21-1266, which were not considered in any federal process.

- (IV) Whether the proposed requirement will improve the ability of the regulated community to comply in a more cost-effective way by clarifying confusing or potentially conflicting requirements (within or cross-media), increasing certainty, or preventing or reducing the need for costly retrofit to meet more stringent requirements later;

The proposed upstream programs will ensure that the regulated community can achieve required GHG emissions reductions in cost-effective ways by giving covered entities options to reduce emissions and develop a measurement-informed inventory to ensure compliance with state targets.

- (V) Whether there is a timing issue which might justify changing the time frame for implementation of federal requirements;

This is a state-specific rule that is not implementing federal requirements. Thus, no timing issue exists.

- (VI) Whether the proposed requirement will assist in establishing and maintaining a reasonable margin for accommodation of uncertainty and future growth;

The regulatory provisions allow a reasonable amount of time for affected entities to comply with the new revisions. As such, affected businesses or industrial sectors are afforded a reasonable margin for accommodation of uncertainty and future growth.

- (VII) Whether the proposed requirement establishes or maintains reasonable equity in the requirements for various sources;

The regulatory provisions offer flexibility to operators in their choice of compliance mechanisms, thus maintaining reasonable equity.

- (VIII) Whether others would face increased costs if a more stringent rule is not enacted;

These revisions are designed with the maximum flexibility for the regulated community. Under HB 21-1266, if the state is not on track to achieve the emission reduction goals, the Commission must adopt further regulations to achieve those goals. Future efforts are likely to be not as cost-effective as the flexible programs in these revisions.

- (IX) Whether the proposed requirement includes procedural, reporting, or monitoring requirements that are different from applicable federal requirements and, if so, why and what the “compelling reason” is for different procedural, reporting, or monitoring requirements;

Reporting requirements beyond those required under federal Part 98 are necessary to effectively quantify and measure Colorado’s progress toward statewide GHG reductions and to achieve the public health, safety, and welfare goals set forth in § 25-7-102, C.R.S. Under these requirements, owners and operators of these sources will be required to compile and report directly to the Division information collected by or available to them for business or other regulatory purposes. While this may overlap with some other federal reporting requirements, it is expected there will be reporting beyond what is required federally.

- (X) Whether demonstrated technology is available to comply with the proposed requirement;

Demonstrated technology exists to enable compliance with the requirements of these revisions.

- (XI) Whether the proposed requirement will contribute to the prevention of pollution or address a potential problem and represent a more cost-effective environmental gain;

These revisions are part of a regulatory program that will cost-effectively reduce statewide GHG emissions to meet the legislative directive of the State Air Act, as revised by SB 19-181, HB 19-1261, and HB 21-1266. As noted, the General Assembly has acknowledged that climate change impacts Colorado's economy and directed that GHG emissions should be reduced across the many sectors of our economy. Colorado has established specific GHG reduction goals within its statutes. Programs established in this rulemaking action provide mechanisms for GHG reductions to occur cost-effectively across a specific, high-emitting sector of the state's economy.

- (XII) Whether an alternative rule, including a no-action alternative, would address the required standard.

The new regulatory requirements and amendments are needed to verify the statutorily mandated emission reductions. As noted, the State Air Act requires the Commission to implement GHG emission reduction strategies in order to secure reductions of pollution consistent with the statewide GHG emission reduction goals. Currently emissions projections over the next decade demonstrate that a no-action alternative would fall short of achieving Colorado's reduction goals. Additionally, no alternative combination of sector-specific regulations has been identified that is sufficient to meet the state's GHG emissions reductions goals.

Findings of Fact

To the extent that § 25-7-110.8, C.R.S., requirements apply to this rulemaking, and after considering all the information in the record, the Commission hereby makes the determination that:

- (I) These rules are based upon reasonably available, validated, reviewed, and sound scientific methodologies, and the Commission has considered all information submitted by interested parties.
- (II) Evidence in the record supports the finding that the rules shall result in a demonstrable reduction of greenhouse gas and VOC emissions.
- (III) Evidence in the record supports the finding that the rules shall bring about reductions in risks to human health and the environment that justify the costs to implement and comply with the rules.
- (IV) The rules are the most cost-effective alternative to achieve the necessary reduction in air pollution and provide the regulated entity flexibility.
- (V) The selected regulatory alternative will maximize the air quality benefits of regulation in the most cost-effective manner.

CC. December 15, 2023 (Revisions to Part A, Sections I.A.1.c. and II.C. and Part B, Sections I.F.3.c., I.J.1.l., I.L.7., II.E.9., and VI.)

This Statement of Basis, Specific Statutory Authority, and Purpose complies with the requirements of the State Administrative Procedure Act, § 24-4-103(4), C.R.S., the Colorado Air Pollution Prevention and Control Act, §§ 25-7-110 and 25-7-110.5., C.R.S., and the Air Quality Control Commission's (Commission) Procedural Rules, 5 Code Colo. Reg. §1001-1.

Basis

On October 7, 2022, EPA reclassified the Denver Metro/North Front Range (DM/NFR) to severe for the 2008 8-hour Ozone National Ambient Air Quality Standard of 75 parts per billion (ppb) (2008 NAAQS), after 2019-2021 ozone data failed to show attainment. See 86 Fed. Reg. 60926. Separately, EPA has also designated the DM/NFR as marginal nonattainment for the 2015 ozone NAAQS of 70 ppb, effective August 3, 2018 (83 Fed. Reg. 25776 (June 4, 2018)).

On November 30, 2021, EPA expanded the boundary of the 2015 ozone nonattainment area to include all of Weld County, effective December 30, 2021 (86 Fed. Reg. 67864). On October 7, 2022, EPA reclassified the DM/NFR and northern Weld County to moderate, after 2019-2021 ozone data failed to show attainment. See 86 Fed. Reg. 60897.

Further, in a March 2023 letter Governor Jared Polis directed the Colorado Department of Public Health and Environment (CDPHE) and the Energy and Carbon Management Commission (ECMC) (fka COGCC) to adopt rules to reduce nitrogen oxides (NOx) emissions from upstream oil and gas operations by 30% in 2025 and 50% by 2050, relative to a 2017 baseline.

To ensure progress towards attainment of the 2008 and 2015 ozone NAAQS and comply with the Governor's directive, the Commission adopted revisions to Regulation Number 7 to reduce the impact from the use and operation of fossil fuel-fired equipment at oil and gas well drilling and completion operations in the nonattainment area between May 1 and September 30 starting in 2024. Specifically, operations occurring in cumulatively impacted communities must be completed using grid power or non-fossil fueled fired equipment and/or established practices. Operations not occurring in cumulatively impacted communities must comply with NOx intensity targets and/or established practices. While not required by the rule, the Commission encourages operators to electrify equipment or schedule operations outside the May through September months, particularly in cumulatively impacted communities. The use and operation restrictions adopted by the Commission will aid in progressing only towards attainment of the ozone NAAQS but also towards achieving the Governor's directive.

Statutory Authority

The State Air Act, specifically § 25-7-105(1), directs the Commission to promulgate such rules and regulations as are consistent with the legislative declaration set forth in § 25-7-102 and that are necessary for the proper implementation and administration of Article 7. The Act broadly defines air pollutant to include essentially any gas emitted into the atmosphere (and, as such, includes VOC, NOx, methane and other hydrocarbons) and provides the Commission broad authority to regulate air pollutants. Section 105(1)(a)(I) directs the Commission to adopt a state implementation plan (SIP) to attain the NAAQS. Section 105(1)(b) directs the Commission to adopt emission control regulations in conformity with § 25-7-109. § 25-7-106 provides the Commission maximum flexibility in developing an effective air quality program and promulgating such combination of regulations as may be necessary or desirable to carry out that program. § 25-7-106 also authorizes the Commission to promulgate emission control regulations applicable to the entire state, specified areas or zones, or a specified class of pollution. § 25-7-106(6) further authorizes the Commission to require owners and operators of any air pollution source to monitor, record, and report information. §§ 25-7-109(1)(a) directs the Commission to adopt emission control requirements that require the use of effective practical air pollution controls for (I) each significant source or category of significant sources of air pollutants and (II) each type of facility, process, or activity which products or might product significant emissions of air pollutants. Section defines emission control regulation to mean a regulation that is applicable to a specified type of facility, process, or activity for the purpose of controlling the extent, degree, or nature of pollution emitted and a regulation that adopts any design, equipment, work practice, or operational standard. § 25-7-109(2) allows emission control regulations pertaining to, among other pollutants, nitrogen oxides and hydrocarbons.

Purpose

The following section sets forth the Commission's purpose in adopting the revisions to Regulation Number 7, and includes the technological and scientific rationale for the adoption of the revisions.

Oil and gas pre-production operations

The Commission adopted rules to reduce the impact of the use and operation of fossil fuel-fired equipment at oil and gas drilling, hydraulic fracturing, and hydraulic refracturing operations. As adopted, the regulations on the use and operation of fossil fuel-fired equipment will have a positive impact on ensuring compliance with the Governor's directive to secure a 30% reduction in upstream oil and gas NOx emissions by 2025, advance environmental justice in Colorado, and move the area towards attainment with federal ozone standards. The Commission adopted these revisions recognizing they are one step in continuing to reduce emissions from the upstream oil and gas sector and directs the Division to continue efforts to collaborate with the ECMC in establishing a NOx reduction steering committee to continue the work of identifying innovative, cost effective, and efficient means of reducing NOx emissions to meet the Governor's directive of achieving a 50% reduction in NOx emissions from the upstream oil and gas sector by 2030. The NOx reduction steering committee may, if appropriate, evaluate the 2026 NOx intensity target and use practices. In achieving NOx reduction targets, the commission urges the steering committee to consider methods of providing protections for all categories of disproportionately impacted communities, and requirements for or methods of encouraging electrification of pre-production engines and stationary engines, including engines under 100 horsepower.

In furtherance of environmental justice and equity (see e.g., HB 21-1266 "...state policy can and should improve public health and the environment and improve the overall well-being of all communities"), the Commission adopted revisions to implement in-use restrictions on oil and gas operators that will result in reduction of NOx and other emissions when drilling and hydraulic fracturing in a cumulatively impacted community. The Commission also adopted provisions requiring operators to meet an upstream NOx intensity for drilling, hydraulic fracturing, hydraulic refracturing, and production operations. Under these requirements, operators will have flexibility to select appropriate and effective equipment and operational methods. As adopted, these revisions offer multiple, cost-effective pathways to compliance that expand the adoption of innovative technology and practices to reduce emissions from drilling, completion, and production operations. Options include the adoption of electric equipment, which the Commission encourages wherever technically and economically practicable, the use of high performing and low emitting equipment, and the use of supplemental technologies and practices such as battery assists and smart engine systems to further reduce emissions. These in-use practice options apply to engines or turbines use to drill or hydraulically fracture or refracture a well, i.e., engines or turbines used to turn the drill bit or power the hydraulic fracturing or refracturing pumps. The general maintenance and operation practices apply to both these engines and turbines as well as other associated equipment used during drilling or hydraulic fracturing or refracturing. The Commission urges the Colorado Department of Public Health and Environment's energy liaison to recommend grid-powered and low-emission engines as best management practices when consulting on proposed oil and gas development plans in the nonattainment area located within all categories of disproportionately impacted communities.

The Commission expects the Division to evaluate compliance with the NOx intensity considering the projected production rate used to determine the NOx intensity but also the actual production rate for the year of compliance. The Commission adopted reporting requirements for operators to submit an interim report of NOx emissions and production for the Division to use to evaluate progress toward the NOx intensity targets, i.e., five months of NOx emissions from May through September over 5/12ths of twelve months of production. The use of interim values recognizes that operators will complete their annual reporting by every June, following any necessary operator quality assurance processes, which would delay the determination of progress. Should the upstream operators not achieve the adopted NOx intensity, after also considering the actual production rate, the Commission directs the Division to evaluate what additional actions may need to be taken to achieve reductions in pre-production and/or production emissions to ensure achievement of the applicable upstream NOx reduction target. Potential actions may include reevaluation of the sector intensity targets, establishment of additional reduction measures, or corrective action from individual operators.

The Commission encourages the Division to prioritize the timely creation of the interim reporting mechanisms (described in VI.E.4). The Commission directs the Division to make available usable information obtained from the November 30 interim report on the Division's website, in a format that provides totals for the nonattainment area, for review by the NOx Reduction Steering Committee and other state agencies and interested parties no later than February 1st.

The Commission intends for the Division to approve "other technologies and operational optimization methods" that align with the achievement of the state's emissions reduction and environmental justice goals but recognizes that cases may exist where, due to the emerging nature of technologies to be used, technologies may not perform as expected or performance is prevented or delayed by an event(s) arising from causes which are not reasonably foreseeable, are beyond the owner or operator's control, and cannot be overcome by due diligence (e.g., a force majeure). In such cases where due diligence was completed yet expected performance is not achieved, the Commission anticipates the Division will engage with the owner or operator to identify appropriate next steps. The Commission further intends for the Division to continue collaboration with ECMC when 'identifying and approving other technologies and operational optimization methods'.

Recognizing the importance of expanding the technical and economic feasibility of electrification to meeting the State's air quality, greenhouse gas, and environmental justice goals, the Commission directs the Division, in complimentary and parallel effort to the NOx reduction steering committee, to continue collaborating with other state agencies, utility providers, and impacted parties in identifying steps forward to expand adoption of electrification. The Commission requests the Division brief the Commission in 2025 on the status and effectiveness of the NOx Intensity Program and discuss, if needed, any recommendations for changes.

Clean-up

The Commission clarified reporting requirements in Part B, Section I.L.7. to identify the additional facility category subject to this reporting requirement, for which the Commission adopted as an expansion to applicability in December 2022. This proposed revision does not expand any existing requirements but merely clarifies the reporting provisions. The Commission also adopted revisions to Part B, Section II.E.9.b. to reflect that the provisions referenced in Section II.E.4.d. have been superseded by the inspection frequencies in Table 5 and, therefore, are no longer necessary to be specifically identified in this reporting requirement as they will be identified in reporting due to the inspection frequencies and source identification in Table 5.

Further, these revisions will include any typographical, grammatical and formatting errors throughout the regulation.

Incorporation by Reference

§ 24-4-103(12.5) of the State Administrative Procedure Act allows the Commission to incorporate by reference federal regulations. The criteria of §24-4-103(12.5) are met by including specific information and making the regulations available because repeating the full text of each of the federal regulations incorporated would be unduly cumbersome and inexpedient. To fully comply with these criteria, the Commission included reference dates to rules and reference methods incorporated in Regulation Number 7.

Additional Considerations

Colorado must revise Colorado's ozone SIP to address the severe ozone nonattainment area requirements. The CAA does not expressly address all of the provisions adopted by the Commission. Rather, federal law establishes the ozone NAAQS and requires Colorado to develop a SIP adequate to attain the NAAQS. Therefore, the Commission adopted certain revisions to Regulation Number 7 to further achieve reductions of ozone precursor emissions. These revisions do not exceed or differ from the federal act due to state flexibility in determining what control strategies to implement to reduce emissions.

However, where the proposal may differ from federal rules under the federal act, in accordance with § 25-7-110.5(5)(b), CRS, the Commission determines

- (I) The revisions to Regulation Number 7 address state only requirements for drilling and completion operations in the oil and gas sector. NSPS OOOO, NSPS OOOOa, NSPS IIII, NSPS JJJJ, and MACT ZZZZ may also apply to the above listed operations and equipment. However, the revisions to Regulation Number 7 apply on a broader basis.
- (II) The federal rules discussed in (I) are primarily technology-based in that they largely prescribe the use of specific technologies or work practices to comply. The proposed state only requirements are technology- and performance- based that allow for maximum flexibility for demonstrating compliance.
- (III) The CAA establishes the 2008 and 2015 ozone NAAQS and requires Colorado to develop SIP revisions that will ensure attainment of the NAAQS. The ozone NAAQS was not determined taking into account concerns unique to Colorado. Similarly, EPA develops NSPS or NESHAP considering national information and data, not Colorado specific issues or concerns. In addition, Colorado cannot rely exclusively on a federally enforceable permit or federally enforceable NSPS or NESHAP to satisfy Colorado's obligation to attain the ozone NAAQS. Instead, Colorado can adopt applicable provisions to reduce emissions of ozone precursors, as the Commission has done here.
- (IV) In addition to the 2008 ozone NAAQS, Colorado must also comply with the lower 2015 ozone NAAQS. These current revisions may improve the ability of the regulated community to comply with new requirements needed to attain the lower NAAQS insofar as efforts conducted to support the revisions adopted by the Commission may prevent or reduce the need to implement additional, more burdensome requirements to meet the more stringent NAAQS.
- (V) The proposed revisions are state-only and are not impacted by federal timelines. However, the implementation of the requirements for drilling, pre-production, and production operations in 2024 and beyond will aid in the attainment of the 2008 ozone NAAQS by the federally established 2026 attainment date.
- (VI) The revisions to Regulation Number 7 establish a flexible framework for compliance and allow for continued growth of Colorado's industry.
- (VII) The revisions to Regulation Number 7 establish reasonable equity for owners and operators subject to these rules by providing the same standards for similarly situated and sized sources.
- (VIII) If Colorado does not attain the ozone NAAQS, EPA will reclassify the ozone control area and northern Weld County to a more stringent nonattainment area. This outcome would result in more stringent federal requirements for the region and may subject others to increased costs.
- (IX) Where necessary, the revisions to Regulation Number 7 include monitoring, recordkeeping, and reporting requirements that correlate, where possible, to similar federal or state requirements.
- (X) Demonstrated technology is available to comply with the revisions to Regulation Number 7. Some of the revisions expand upon requirements already applicable.
- (XI) As set forth in the Economic Impact Analysis, the revisions to Regulation Number 7 will reduce emissions in a cost-effective manner.

Alternative rules could also provide reductions in ozone, VOC, and NO_x to help to attain the NAAQS. However, a no action alternative would very likely result in failure to attain the ozone NAAQS. As part of adopting the revisions to Regulation Number 7, the Commission has taken into consideration each of the factors set forth in CRS § 25-7-109(1)(b).

To the extent that CRS § 25-7-110.8 requirements apply to this rulemaking, and after considering all the information in the record, the Commission hereby makes the determination that:

- (I) These rules are based upon reasonably available, validated, reviewed, and sound scientific methodologies, and the Commission has considered all information submitted by interested parties.
 - (II) Evidence in the record supports the finding that the rules shall result in a demonstrable reduction of VOCs and NO_x emissions.
 - (III) Evidence in the record supports the finding that the rules shall bring about reductions in risks to human health and the environment that justify the costs to implement and comply with the rules.
 - (IV) The rules are the most cost-effective to achieve the necessary and desired results, provide the regulated community flexibility, and achieve the necessary reduction in air pollution.
 - (V) The rule will maximize the air quality benefits of regulation in the most cost-effective manner.
-

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Office of the Attorney General

Tracking number: 2023-00636

Opinion of the Attorney General rendered in connection with the rules adopted by the
Air Quality Control Commission

on 12/15/2023

5 CCR 1001-9

REGULATION NUMBER 7 Control of Emissions from Oil and Gas Emissions Operations

The above-referenced rules were submitted to this office on 12/21/2023 as required by section 24-4-103, C.R.S. This office has reviewed them and finds no apparent constitutional or legal deficiency in their form or substance.

January 02, 2024 10:47:52

Philip J. Weiser
Attorney General
by Kurtis Morrison
Deputy Attorney General

Permanent Rules Adopted

Department

Department of Public Health and Environment

Agency

Air Quality Control Commission

CCR number

5 CCR 1001-14

Rule title

5 CCR 1001-14 AIR QUALITY STANDARDS, DESIGNATIONS AND EMISSION
BUDGETS 1 - eff 02/14/2024

Effective date

02/14/2024

DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Air Quality Control Commission

AIR QUALITY STANDARDS, DESIGNATIONS AND EMISSION BUDGETS

5 CCR 1001-14

[Editor's Notes follow the text of the rules at the end of this CCR Document.]

Pursuant to Colorado Revised Statutes Section 24-4-103 (12.5), materials incorporated by reference are available for public inspection during normal business hours, or copies may be obtained at a reasonable cost from the Air Quality Control Commission (the Commission), 4300 Cherry Creek Drive South, Denver, Colorado 80246-1530. The material incorporated by reference is also available through the United States Government Printing Office, online at www.govinfo.gov. Materials incorporated by reference are those editions in existence as of the date indicated and do not include any later amendments.

Unless otherwise indicated, any incorporation by reference of 40 CFR Section 93.118 are to the edition published March 14, 2012.

I. Ambient Air Quality Standards

I.A. National Ambient Air Quality Standards

For National Ambient Air Quality Standards and associated ambient air monitoring reference methods, see Title 40, CFR Part 50.

I.B. Colorado Ambient Air Quality Standards (State Only)

I.B.1. Sulfur Dioxide (SO₂)¹

The actual concentration of sulfur dioxide at any given receptor site (no greater than five meters above ground level) in the State of Colorado shall not exceed a three-hour maximum of 700 micrograms per cubic meter (ug/m³) (or 0.267 parts per million by volume (ppmv) at one atmosphere and 25 degrees Celsius more than once in any twelve-month period.

The analytical methods to be employed for the determination of ambient air concentrations of sulfur dioxide shall be any reference method identified in title 40 CFR, Part 50, Appendix A. Alternative methods may be used listed as a "reference" or "equivalent" method by the U.S. Environmental Protection Agency in accordance with Title 40 CFR, Part 53. Concentrations shall be reported as micrograms per cubic meter or parts per million referred to a temperature of 25 degrees Celsius and a pressure of one atmosphere (1013 millibars).

¹Sulfur Dioxide: Revised: 3/10/83; Effective 4/30/83. Revised 2/18/10; Effective 3/30/10.

II. Reserved

III. Classification of Nonattainment and Attainment/Maintenance Areas in Colorado*

<u>Carbon Monoxide</u>		
<u>Area</u>	<u>Classification</u>	<u>Boundary</u>
Denver Metro Area	Attainment/Maintenance (effective 1/14/02)	See attached legal description and map.
Colorado Springs	Attainment/Maintenance (effective 10/25/99)	Urban Transportation Planning Study Area as defined in 1989. See attached map.
Fort Collins	Attainment/Maintenance (effective 9/22/03)	Fort Collins Urban Growth Area boundary as adopted by the city of Fort Collins and the Larimer County Commissioners and in effect as of July 30, 1991. See attached map.
Greeley Area	Attainment/Maintenance (effective 5/10/99)	Urban Boundaries defined in the North Front Range Regional Transportation Plan, May 1990. See attached map.
Longmont	Attainment/Maintenance (effective 11/23/99)	Begin at Highway 52 and Boulder/Weld county line and go west to 95th Street/Hooker Road to the intersection of Plateau Road, then west on Plateau Road to the intersection of N. 75th Street, then north to the Boulder/Larimer County line, then east along the Boulder/Larimer County line to the Boulder/Weld county line, then south along the Boulder/Weld County line to Highway 52, plus the portion of the City of Longmont east of the Boulder/Weld County line in Weld County. See attached map.

Description of Boundaries for Denver Metropolitan Carbon Monoxide Attainment/Maintenance Area

The Boundaries for the Denver metropolitan attainment/maintenance area for carbon monoxide (CO) are described as follows:

Starting at Colorado Highway 52 where it intersects the eastern boundary of Boulder County;

Follow Highway 52 where it intersects Colorado Highway 119;

Follow northern boundary of Boulder city limits west to the 6000-ft. elevation line;

Follow the 6000-ft. elevation line south through Boulder and Jefferson counties to US 6 in Jefferson County;

Follow US 6 west to the Jefferson County-Clear Creek County line;

Follow the Jefferson County western boundary south to the southern boundary of Range 72 West, Township 6 South, Section 24;

Follow the southern section line east to the eastern boundary of Range 71 West, Township 6 South, Section 24;

Follow the eastern section line north to South Turkey Creek;

Follow South Turkey Creek northeast to Deer Creek Canyon Road;

Follow Deer Creek Canyon Road to the eastern boundary of Range 69 West, Township 6 South, Section 5;

Follow the Pike National Forest boundary southeast through Douglas County to the Douglas County - El Paso County line;

Follow the southern boundary of Douglas County east to the Elbert County line;

Follow the eastern boundary of Douglas County north to the Arapahoe county line;

Follow the southern boundary of Arapahoe County east to Kiowa Creek;

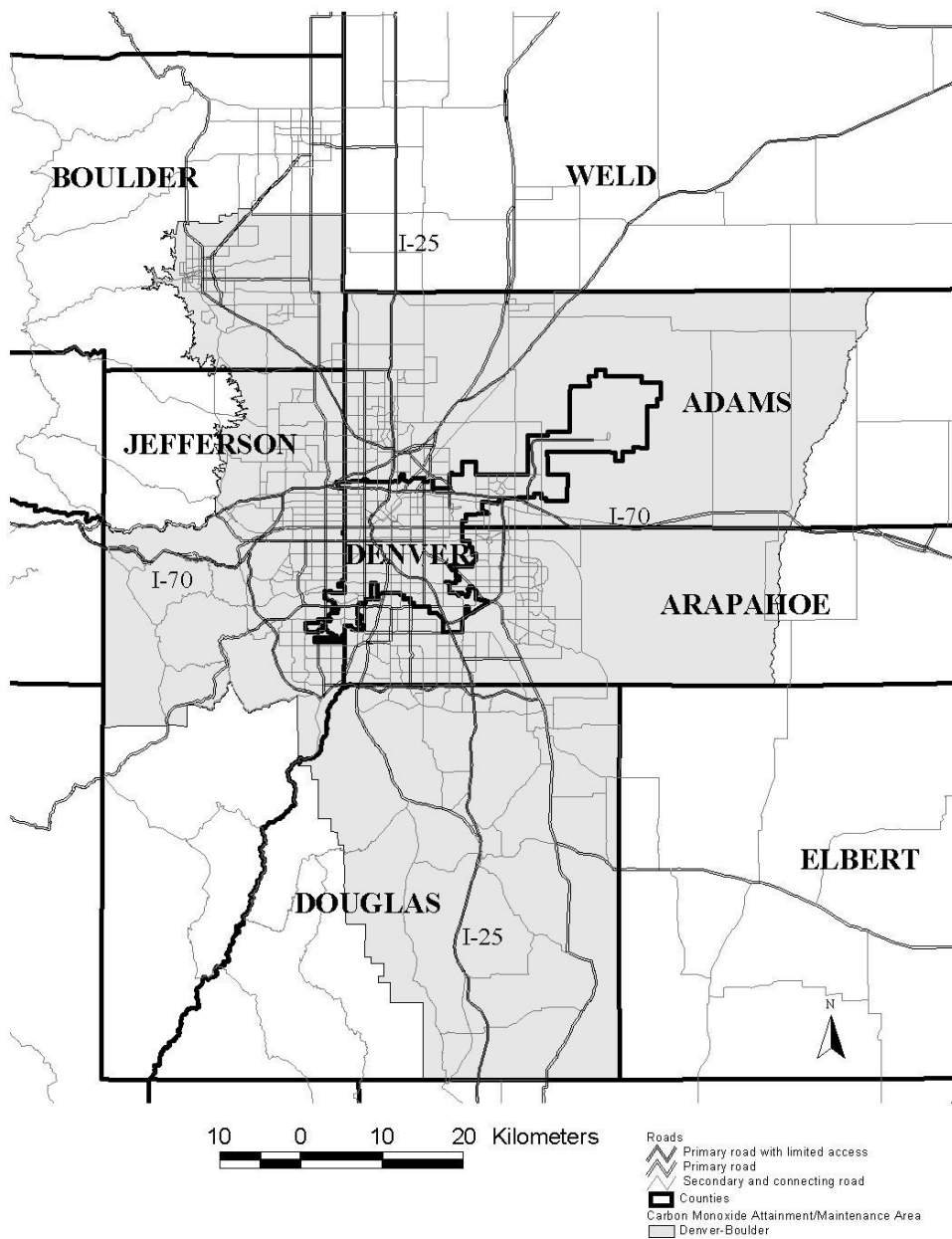
Follow Kiowa Creek northeast through Arapahoe county and Adams counties to the Adams County - Weld County line;

Follow the northern boundary of Adams County west to the Boulder County line;

Follow the eastern boundary of Boulder County north to Highway 52.

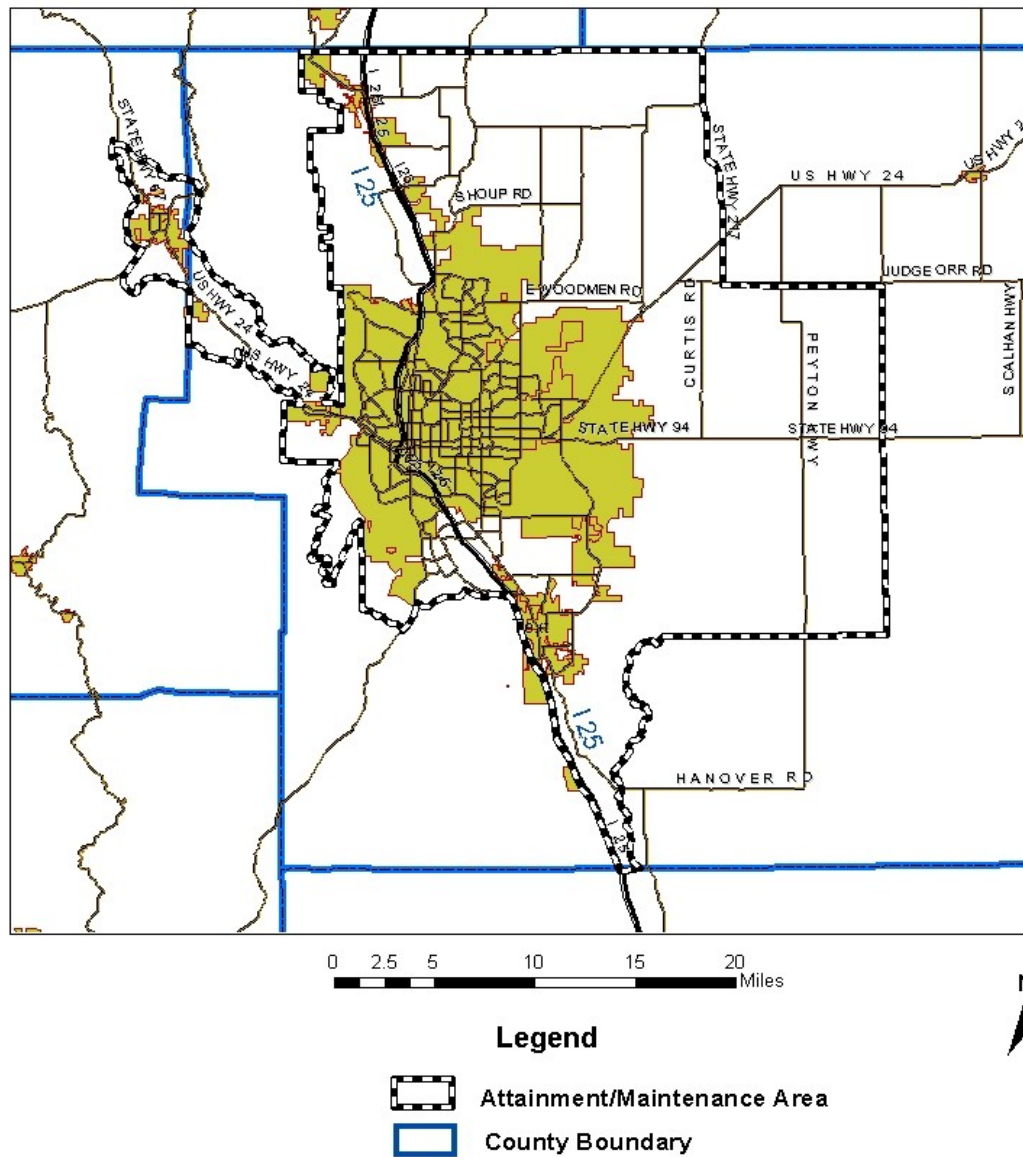
Descriptions and Maps

III.A. Denver Attainment/Maintenance Area for Carbon Monoxide



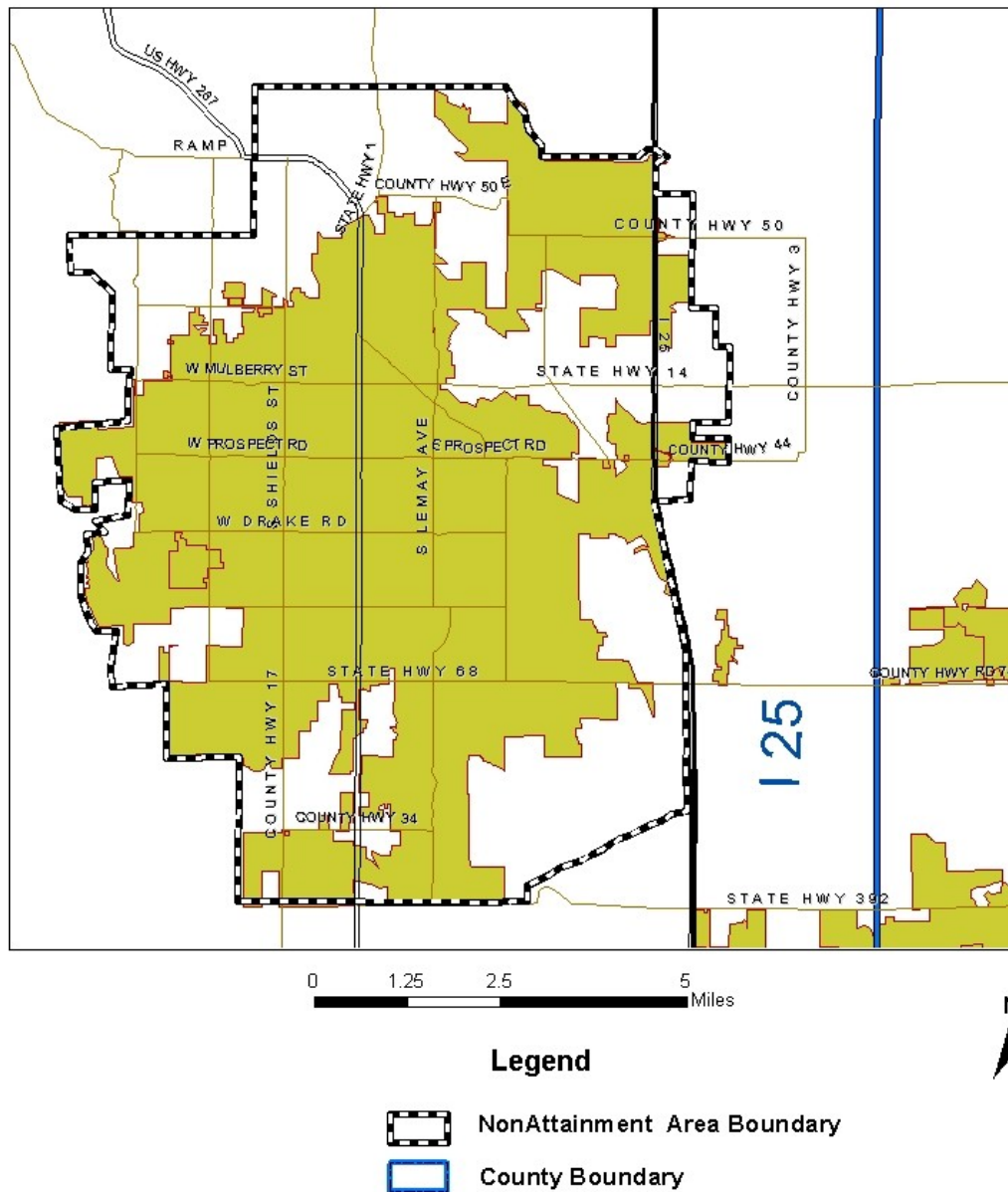
Map Generated September 1999 by CDPHE/APCD/Technical Services Program

III.B. Colorado Springs Attainment/Maintenance Area for Carbon Monoxide



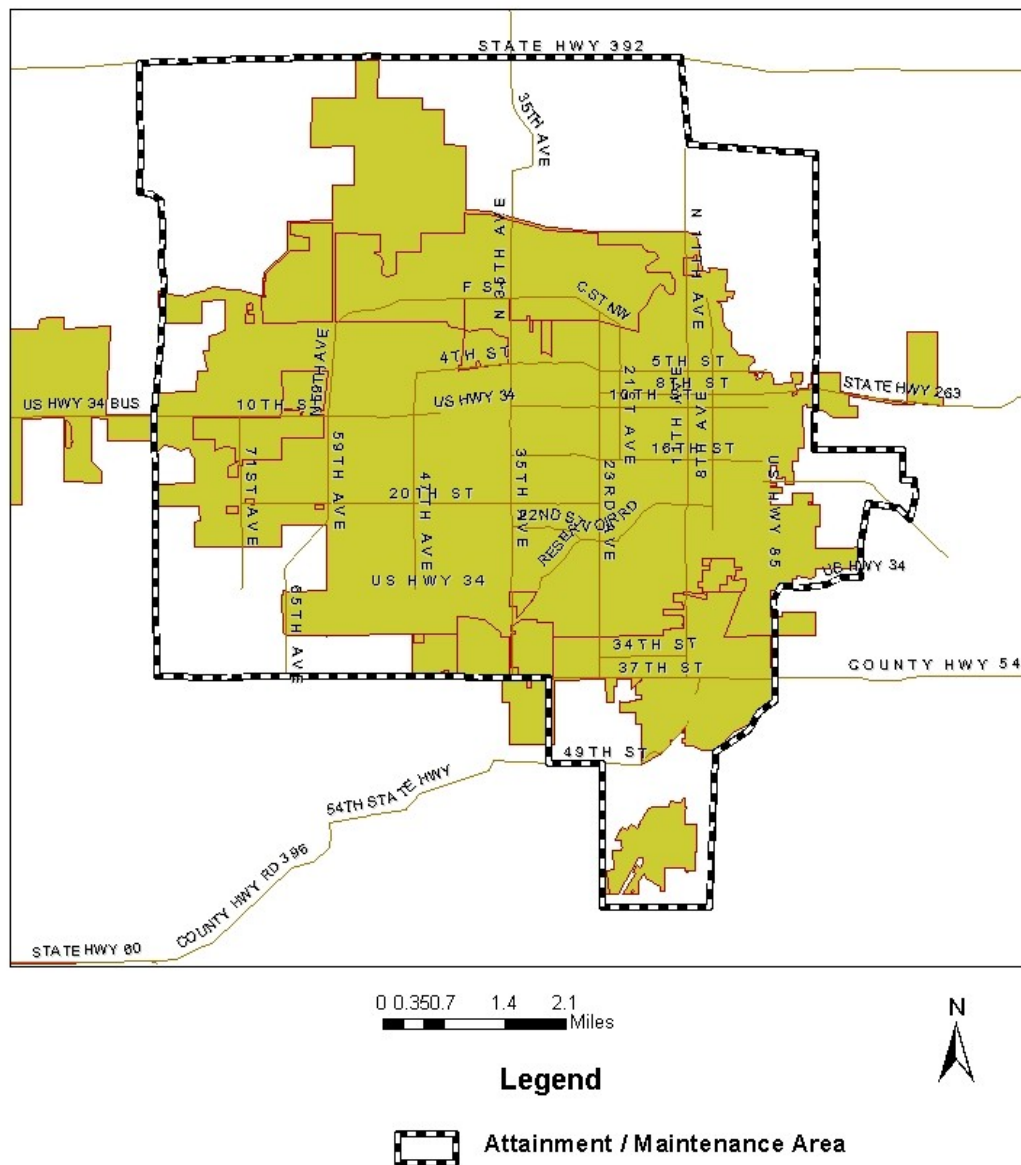
Map Created by the APCD Technical Services Program
Colorado Department of Public Health and Environment

III.C. Fort Collins Attainment/Maintenance Area for Carbon Monoxide



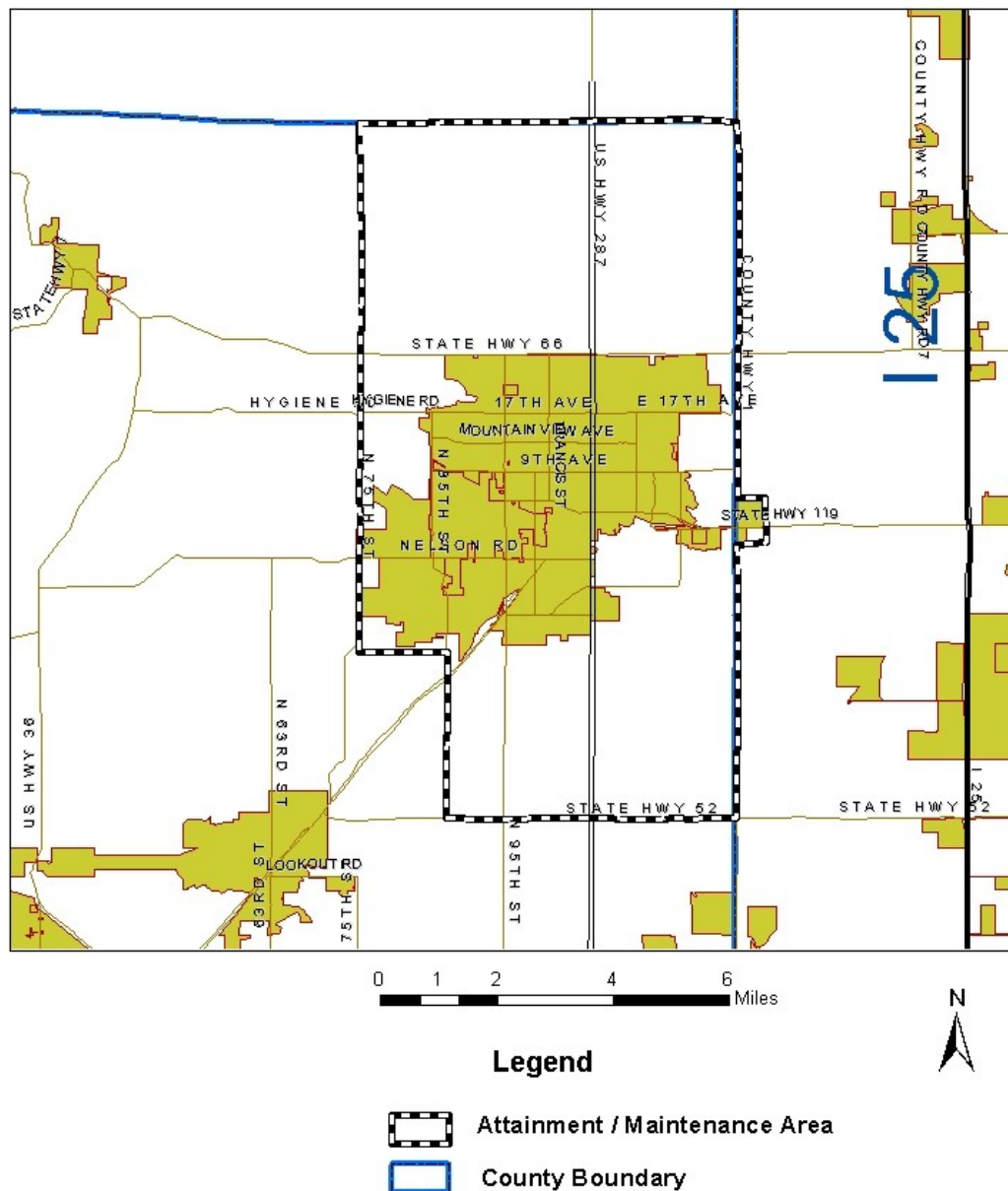
Map created by the APCD Technical Services Program.
Colorado Department of Public Health and Environment

III.D. Greeley Attainment/Maintenance Area for Carbon Monoxide



Map created by the APCD Technical Services Program.
Colorado Department of Public Health and Environment

III.E. Longmont Attainment/Maintenance Area for Carbon Monoxide



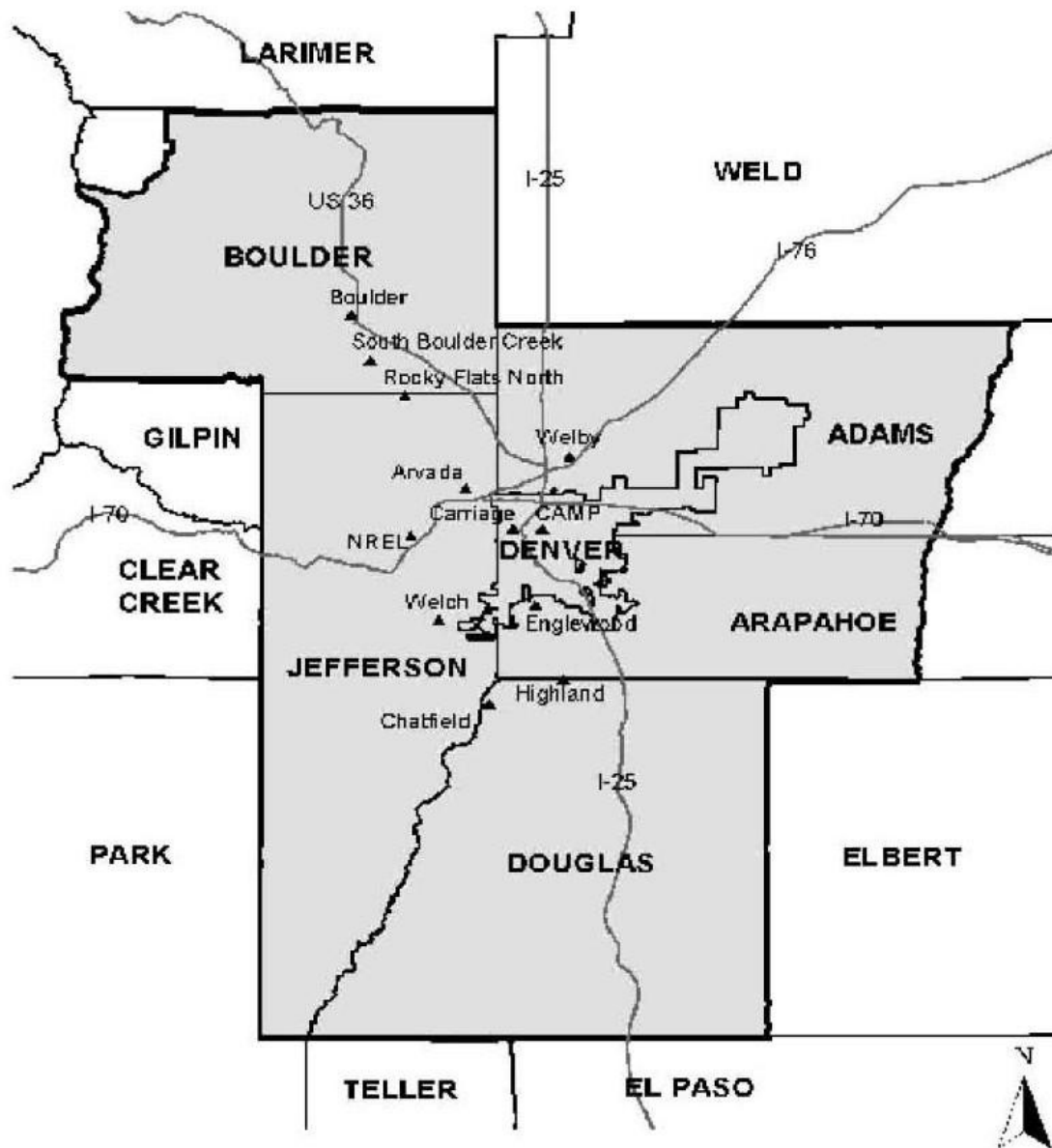
Map created by the APCD Technical Services Program.
Colorado Department of Public Health and Environment

Area	Classification	Boundary
PM10		
Denver Metro (effective 10/16/02)	Attainment/Maintenance *	All of Denver, Jefferson, and Douglas Counties; Boulder County (excluding Rocky Mountain National Park) and the Automobile Inspection and Readjustment Program portions of Adams and Arapahoe Counties. See attached map.
Steamboat Springs (effective 11/24/04)	Attainment/Maintenance	Steamboat Springs Area Airshed as adopted by the Routt County Commissioners May 28, 1991. See attached map.
Pagosa Springs (effective 8/14/01)	Attainment/Maintenance	See attached map.
Telluride/Mt. Village/San Miguel County (effective 8/14/01)	Attainment/Maintenance	See attached map.
Aspen/Pitkin County (effective 7/14/03)	Attainment/Maintenance	See attached map.
Cañon City/Fremont County (effective 7/31/00)	Attainment/ Maintenance	See attached map.
Lamar (effective 11/25/05)	Attainment/Maintenance	Lamar City Limits as of July 30, 1991. See attached map.
Ozone		
Denver 1-Hour Ozone Attainment/Maintenance Area (effective 10/11/01)	Attainment/Maintenance	The Counties of Jefferson and Douglas, the Cities and Counties of Denver and Broomfield, Boulder County (excluding Rocky Mountain National Park), Adams County west of Kiowa Creek, and Arapahoe County west of Kiowa Creek. See attached map.
Denver Metro Area/North Front Range 8-Hour Ozone Nonattainment Area (effective 11/20/07)	Nonattainment	<p>The Counties of Adams, Arapahoe, Boulder (includes part of Rocky Mountain National Park), Douglas, and Jefferson; the Cities and Counties of Denver and Broomfield; and the following portions of the Counties of Larimer and Weld:</p> <p>For Larimer County (includes part of Rocky Mountain National Park), that portion of the county that lies south of a line described as follows: Beginning at a point on Larimer County's eastern boundary and Weld County's western boundary intersected by 40 degrees, 42 minutes, and 47.1 seconds north latitude, proceed west to a point defined by the intersection of 40 degrees, 42 minutes, 47.1 seconds north latitude and 105 degrees, 29 minutes, and 40.0 seconds west longitude, thence proceed south on 105 degrees, 29 minutes, 40.0 seconds west longitude to the intersection with 40 degrees, 33 minutes and 17.4 seconds north latitude, thence proceed west on 40 degrees, 33 minutes, 17.4 seconds north latitude until this line intersects Larimer County's western boundary and Grand County's eastern boundary.</p> <p>For Weld County, that portion of the county that lies south of a line described as follows: Beginning at a point on Weld County's eastern boundary and Logan County's western boundary intersected by 40 degrees, 42 minutes, 47.1 seconds north latitude, proceed west on 40 degrees, 42 minutes, 47.1 seconds north latitude until this line intersects Weld County's western boundary and Larimer County's eastern boundary.</p> <p>See attached map.</p>

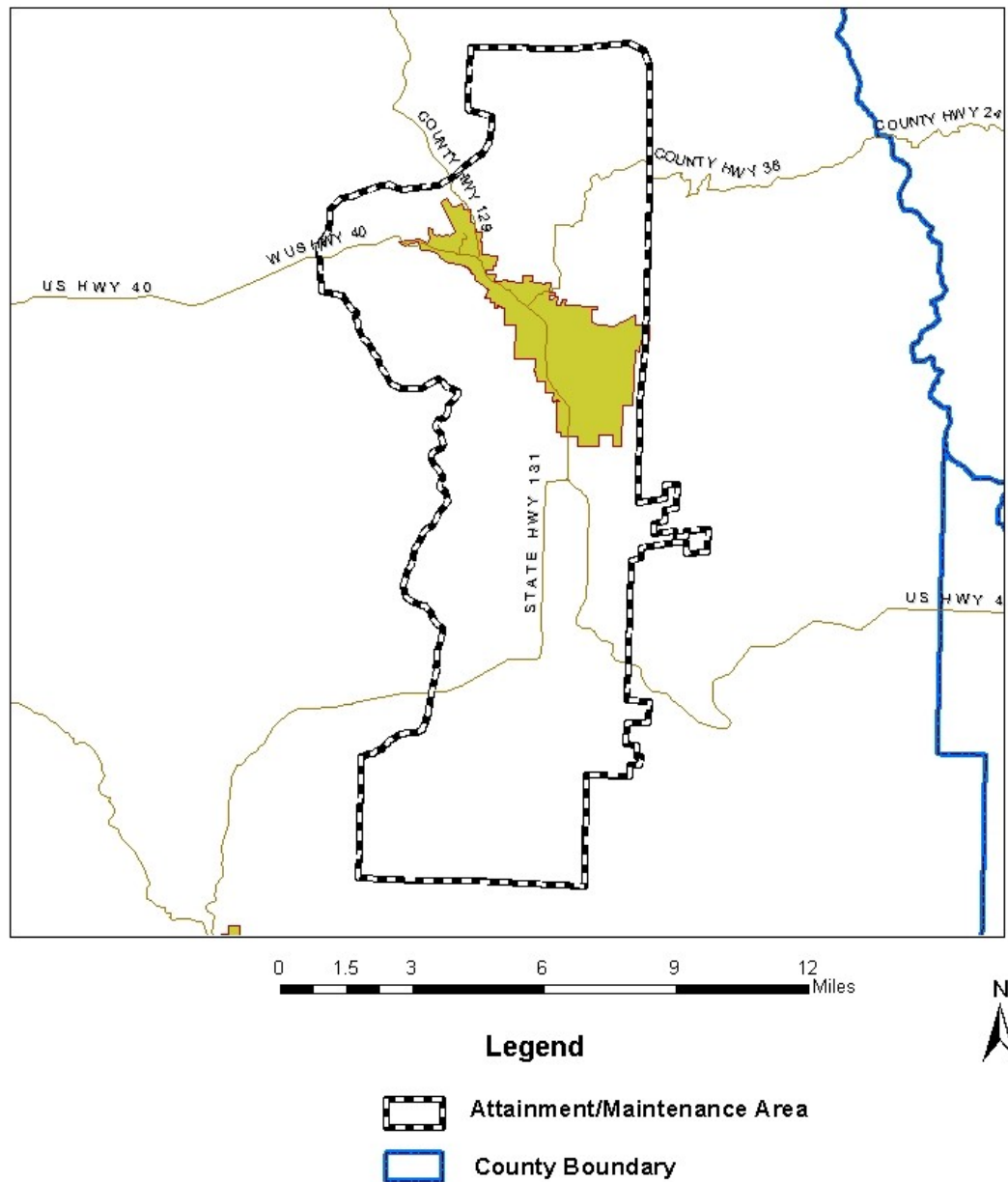
*The classification of the Denver Metro Area as an attainment/maintenance area shall not affect Air Quality Control Commission Regulations Number 1, 5 CCR 1001-3, Section VIII; or Number 3, 5 CCR 1001-5, Part B, Section IV.D.2(d)(i) or (ii). Such provisions shall apply in the Denver Metro Area in the same manner as they would apply if the Denver Metro Area were nonattainment area for PM10.

III.F. Denver PM10 and 1-Hour Ozone Attainment/Maintenance Area

Map of the Denver Metropolitan 1-Hour Ozone
Attainment/Maintenance Area and Monitoring Sites

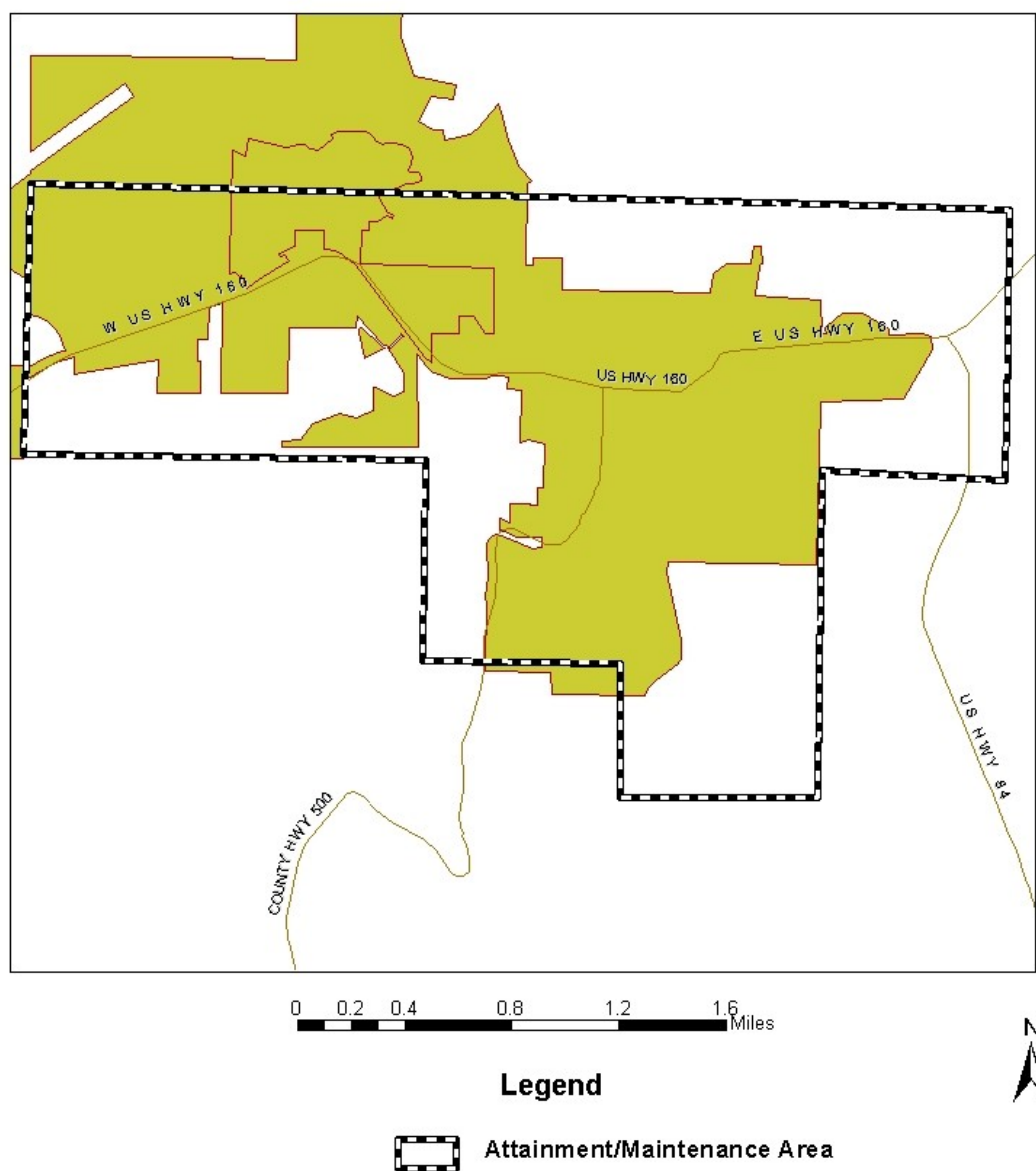


III.G. Steamboat Springs Attainment/Maintenance Area for PM₁₀



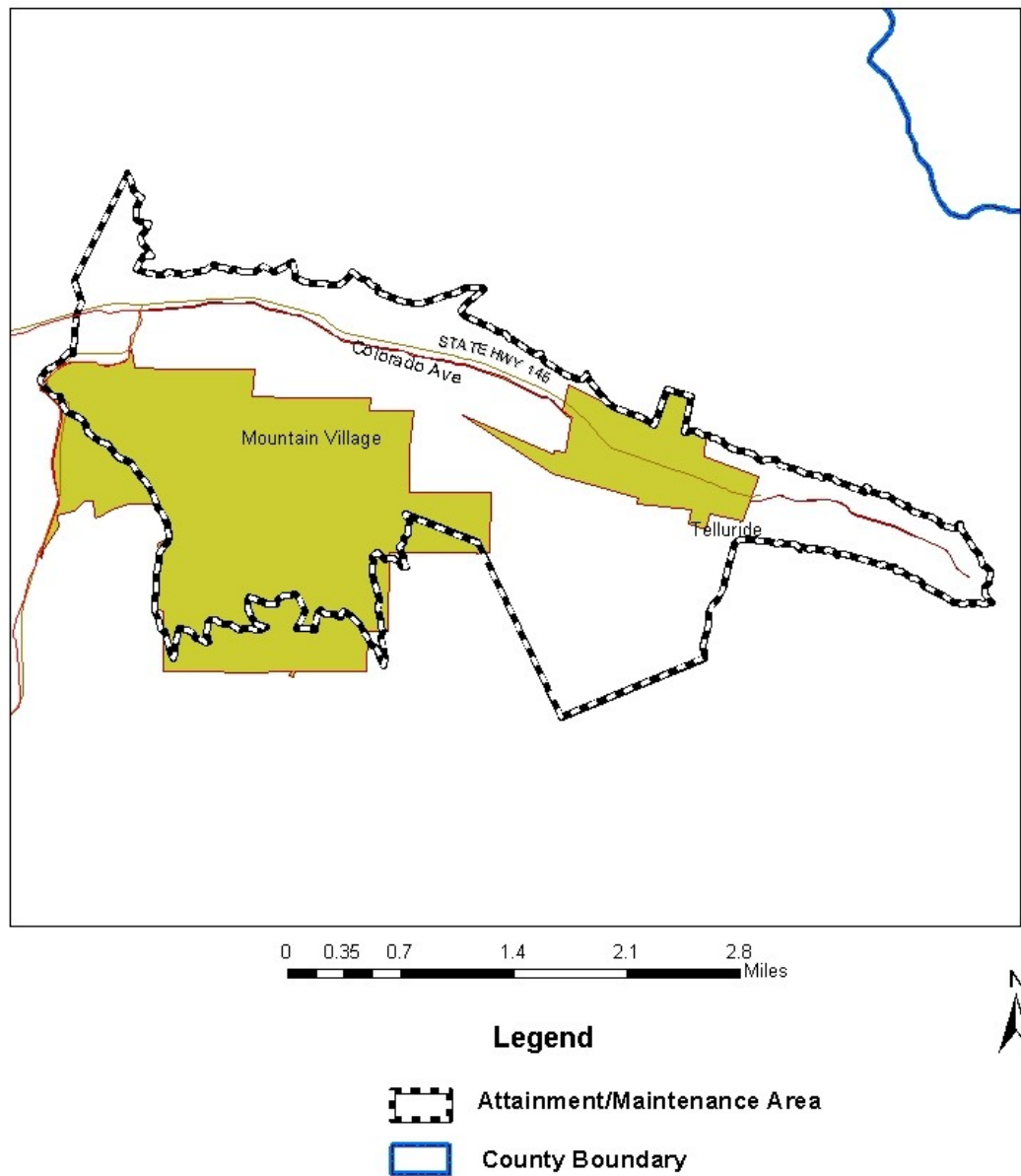
Map created by the APCD Technical Services Program,
Colorado Department of Public Health and Environment

III.H. Pagosa Springs Attainment/Maintenance Area for PM₁₀



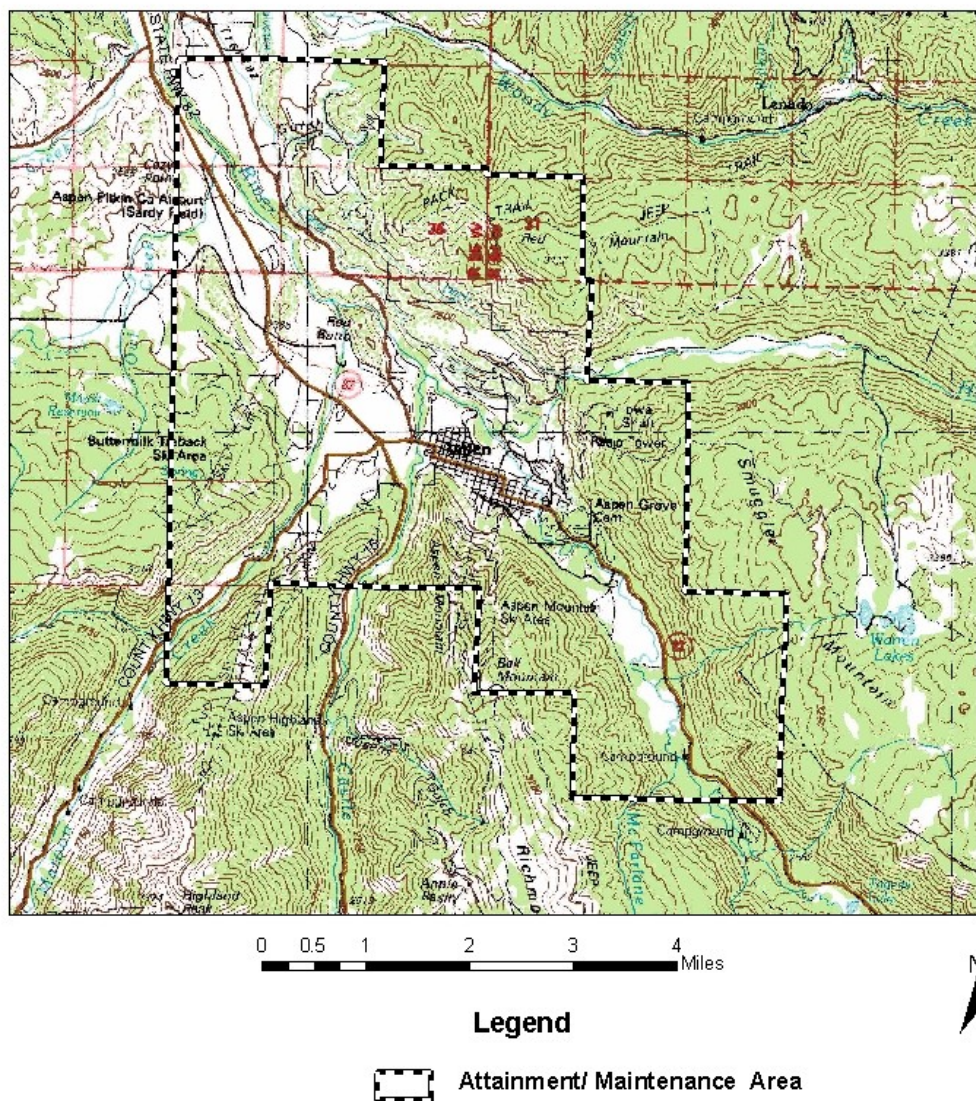
Map created by the APCD Technical Services Program.
Colorado Department of Public Health and Environment

III.I. Telluride/Mt. Village/San Miguel County Attainment/Maintenance Area for PM10



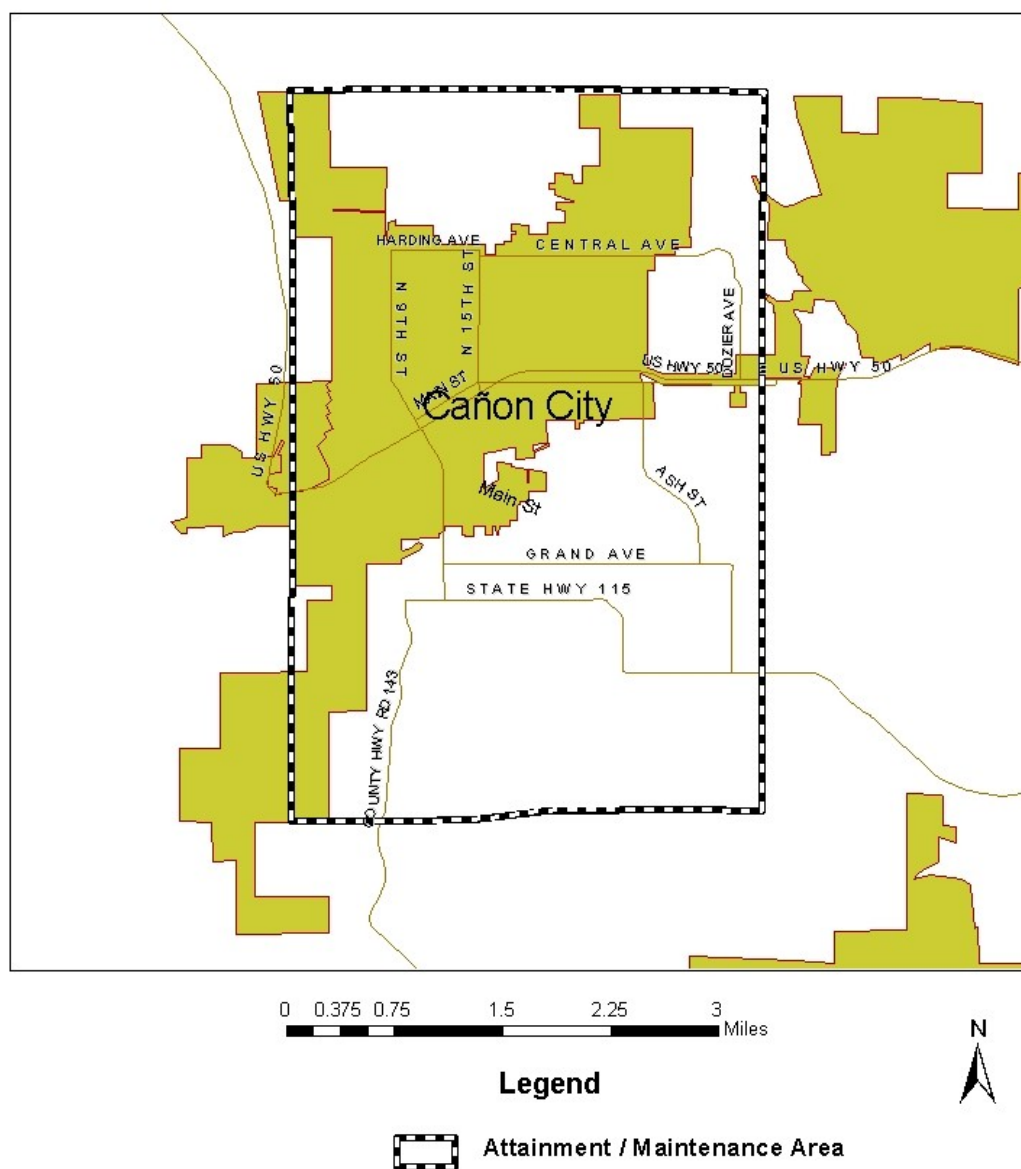
Map created by the APCD Technical Services Program.
Colorado Department of Public Health and Environment

III.J. Aspen/Pitkin County Attainment/Maintenance Area for PM₁₀



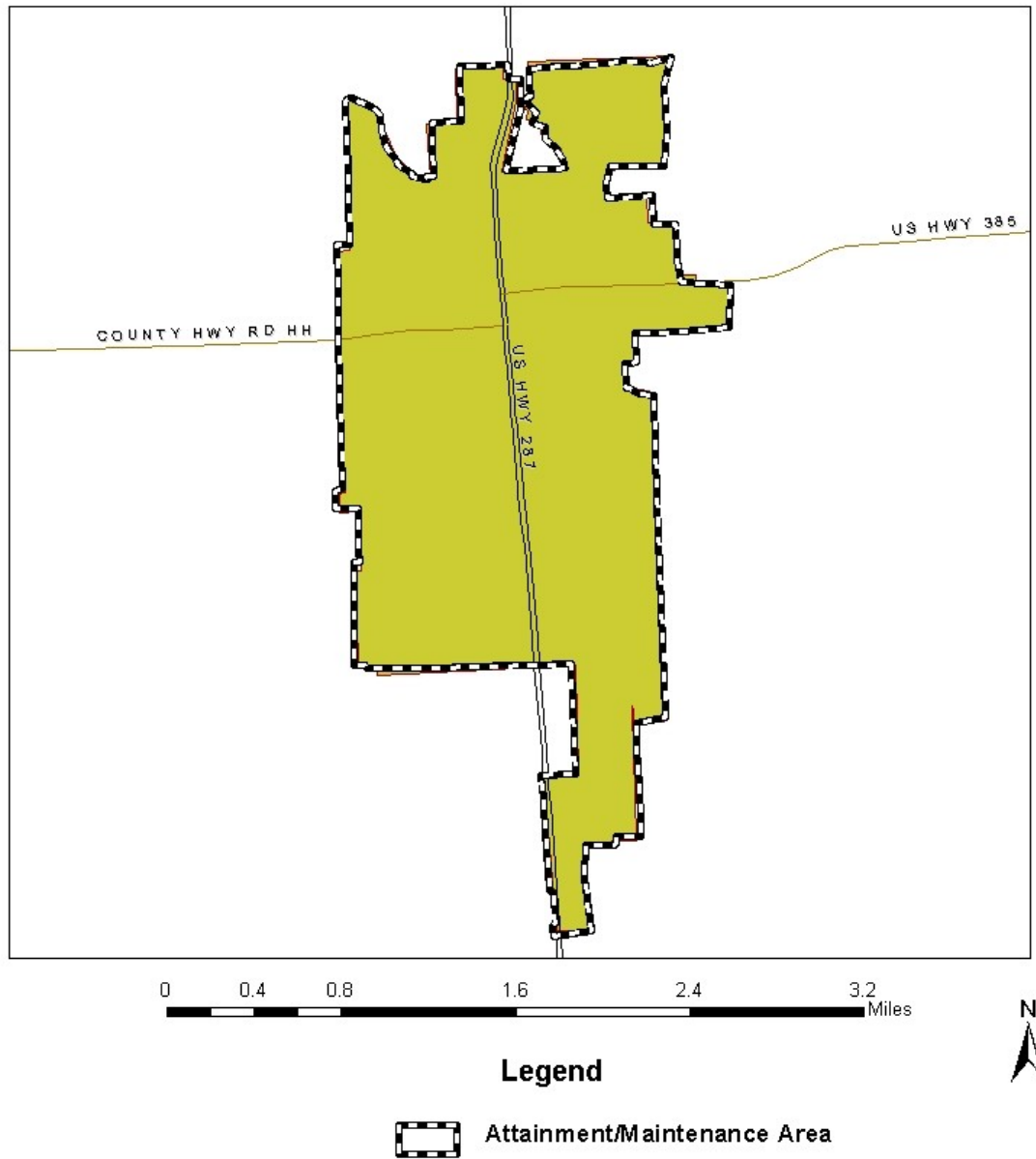
Map created by the APCD Technical Services Program,
Colorado Department of Public Health and Environment

III.K. Cañon City/Fremont County Attainment/Maintenance Area for PM10



Map created by the APCD Technical Services Program.
Colorado Department of Public Health and Environment

III.L. Lamar Attainment/Maintenance Area for PM₁₀

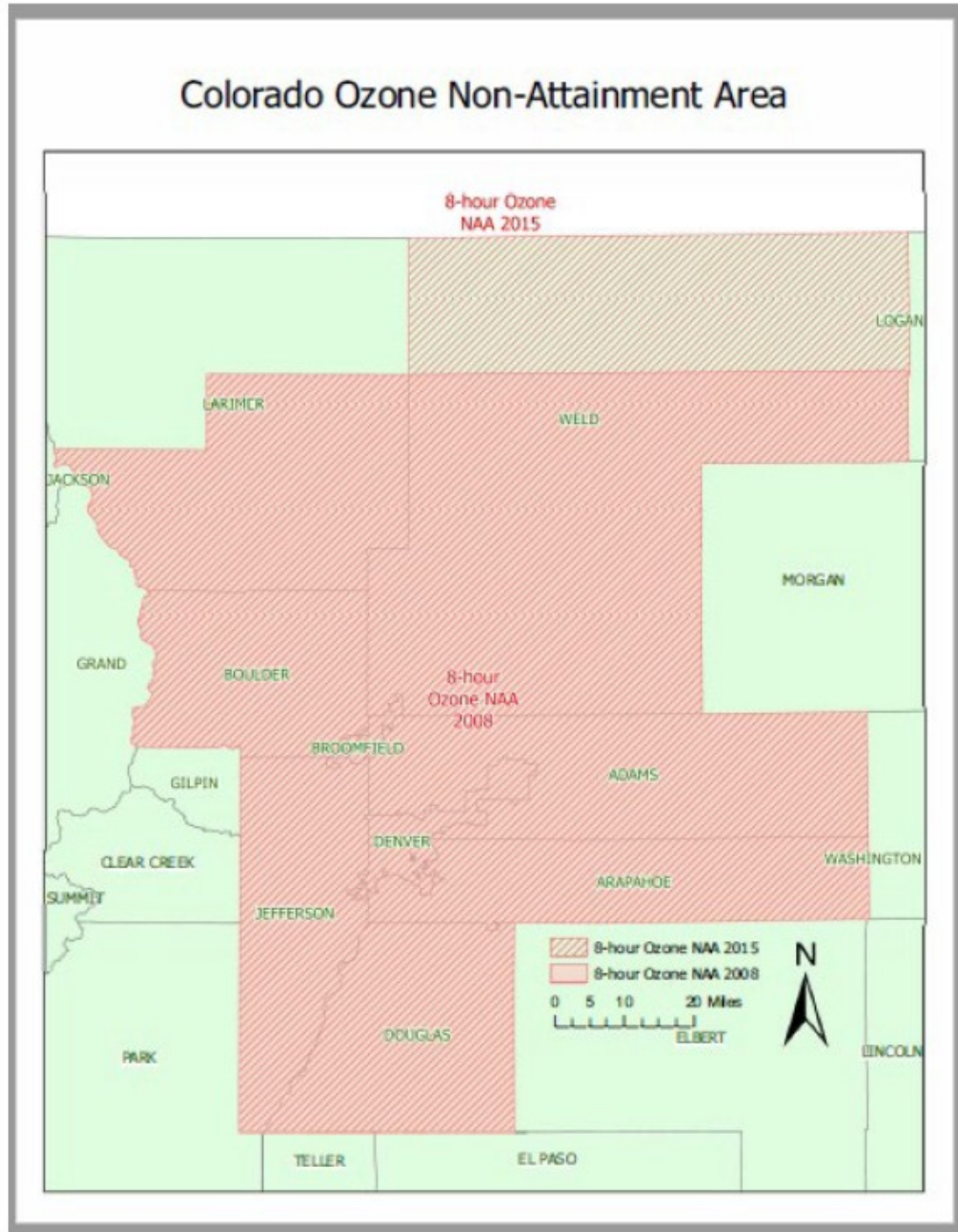


Map created by the APCD Technical Services Program.
Colorado Department of Public Health and Environment

The map displays the Denver metropolitan area and its surrounding regions. The Rocky Mountain National Park area is highlighted in green in the northwest. Major highways are shown in blue, including Interstates 70, 25, and 76, and US Routes 36, 40, 85, 14, 34, 470, and 285. Cities labeled include Fort Collins, Boulder, Denver, and Castle Rock. The Denver International Airport is marked with an airplane icon. The map also shows the locations of the Rocky Mountain National Park and the surrounding counties of Larimer, Weld, Boulder, Adams, Arapahoe, Douglas, Elbert, Lincoln, Logan, and Cheffee.



III.O. Denver Metro Area/North Front Range and northern Weld County 8-Hour Ozone Nonattainment Area, 2015 Ozone National Ambient Air Quality Standard



IV. Visibility Standard

To be added to the Colorado Air Quality Control Commission document "Ambient Air Standards for Metropolitan Denver Air Quality Control Region, State Air Pollution Control Areas and the State of Colorado."

Visibility Standard for the AIR Program Area

Level: The Visibility Standard for the AIR program area is an atmospheric extinction of .076/km¹, equivalent to a standard visual range of 32 miles²

Averaging Time: The Averaging time is four hours. All four hours must be contiguous. No four-hour average in violation of the standard can have hours in common with any other four-hour period in violation of the standard.³

Applicability: The visibility standard is applicable in the AIR program area.⁴ The visibility standard applies during an eight-hour period from 8:00 a.m. (0800) to 4:00 p.m. (1600) each day Mountain Local Time. The visibility standard applies only during hours when the hourly average relative humidity is less than 70 percent.⁵

¹Extinction is a measure of the ability of the atmosphere to attenuate light. It is traditionally expressed in light attenuation per kilometer. It is measured directly with a long-path transmissometer or by other equivalent methods as determined by the Air Pollution Control Division.

²Extinction (Bext) can be converted to standard visual range (SVR) in miles as follows:

$$\text{SVR (Miles)} = (3.912/(\text{Bext} + .01 \text{ km})) * .06214$$

where Bray is the Rayleigh scattering coefficient (.0099/km) for Denver's altitude and the visual range is standardized to a Rayleigh scattering coefficient of .01/km or an altitude of 1.55km. The formula assumes a contrast threshold of two percent.

³There are five possible contiguous four-hour periods from 0800 to 1600 each day (0800 to 1200, 0900 to 1300, 1000 to 1500, and 1200 to 1600). Only the periods from 0800 to 1200 and from 1200 to 1600 do not have overlapping hours. Therefore, a maximum of two standard violations are possible each day that have no overlapping hours or hours in common.

⁴The AIR program area is defined in C.R.S. 42-4-307 (8).

⁵Any hour with a relative humidity of 70 percent or over would not be included in the four-hour running averages.

* Visibility: Adopted: 12/21/89 Effective: 1/1/95

V. Emission Budgets for Attainment/Maintenance Areas in the State of Colorado

V.A. Budgets

V.A.1. The following Motor Vehicle Emission Budgets shall be utilized to assess the conformity of Transportation Plans, TIPs, and where appropriate, Projects, for the applicable periods and geographic areas indicated:

<u>Denver Attainment/Maintenance Area</u> (Modeling Domain)	<u>PM10</u> : 2015 through 2021: 54 tons/day; 2022 and beyond: 55 tons/day. <u>Nitrogen Oxides</u> : 2015 through 2021: 70 tons/day; 2022 and beyond: 56 tons/day Trading provisions: Trading of PM10 for NOx, or NOx for PM10 to adjust emission budgets for purposes of demonstrating transportation conformity shall be allowed using the emission trading formula as follows: For trades necessary to increase a primary PM10 budget, 15.0 tons/day of NOx will be taken from the NOx budget to increase the primary PM10 budget by 1.0 tons/day, a ration of 15 to 1. For trades necessary to increase a NOx budget, 1.0 tons/day of primary PM10 will
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	<p>be taken from the primary PM10 budget to increase the NOx budget by 12.0 tons/day, a ratio of 1 to 12.</p> <p>Implementation of trading provisions: In the event the MPO cannot demonstrate consistency with the specific PM10 and NOx mobile source emission budgets, the trading provisions may be utilized only after the MPO has considered all reasonably available local control measures to meet the budgets. The MPO must demonstrate the need for trading through the usual consultation procedures for state implementation plan development delineated in Section IV (F) of AQCC Regulation Number 10, Criteria for Analysis of Conformity.</p> <p>If trading is utilized, the MPO shall include the following information in the transportation conformity determination:</p> <ol style="list-style-type: none"> 1) The budget for primary PM10 and NOx for each required year of the conformity determination, before trading is employed; (2) The portion of the original budget to be used to supplement a wanting budget, for each required year for the conformity determination; (3) The increased budget that results from trading, along with relevant calculations, and (4) the resulting primary PM10 and NOx budgets for each required year of the conformity demonstration. <p>The MPO shall then compare projected emissions to the adjusted PM10 and NOx motor vehicle emission budgets to demonstrate conformity.</p>
<u>Denver Attainment/Maintenance Area</u>	<p><u>Ozone Precursors (attainment/maintenance area boundary) NOx 2002 and beyond 134 tpsd VOC 2002 and beyond 119 tpsd (tpsd = tons per summer day) Carbon Monoxide (attainment/maintenance area boundary) 2013 through 2020: 1625 tons/day; 2021 and beyond: 1600 tons/day.</u></p>
<p><u>Denver Metro Area/North Front Range 8-Hour Ozone Moderate Nonattainment Area (for the 1997 8-Hour Ozone NAAQS; to be superseded by the emissions budgets associated with the 2008 8-Hour Ozone NAAQS upon the effective date of EPA's determination of adequacy for transportation conformity purposes)</u></p> <p>(State Only)</p>	<p><u>Regional Emissions Budgets</u></p> <p><u>NOx: 122.9 tons/day</u></p> <p><u>VOCs: 109.2 tons/day</u></p> <p><u>Southern Sub-Regional Emissions Budgets</u></p> <p><u>NOx: 102.4 tons/day</u></p> <p><u>VOCs: 89.7 tons/day</u></p> <p><u>Northern Sub-Regional Emissions Budgets</u></p> <p><u>NOx: 20.5 tons/day</u></p> <p><u>VOCs: 19.5 tons/day</u></p>
<p><u>Denver Metro Area/North Front Range 8-Hour Ozone Serious Nonattainment Area (for the 2008 8-Hour Ozone NAAQS; these emissions budgets will supersede the previous emissions budgets upon the effective date of EPA's determination of adequacy for transportation conformity purposes)</u></p> <p>(State Only)</p>	<p><u>Regional Emissions Budgets</u></p> <p><u>NOx: 54.7 tons/day</u></p> <p><u>VOCs: 49.4 tons/day</u></p> <p><u>Southern Sub-Regional Emissions Budgets</u></p> <p><u>NOx: 45 tons/day</u></p> <p><u>VOCs: 41.2 tons/day</u></p> <p><u>Northern Sub-Regional Emissions Budgets</u></p> <p><u>NOx: 9.7 tons/day</u></p> <p><u>VOCs: 8.2 tons/day</u></p>
<p><u>Denver Metro Area/North Front Range 8-Hour Ozone Nonattainment Area (for the 2008 8-Hour Ozone NAAQS; these emissions budgets will supersede the previous emissions budgets upon the effective date of</u></p>	<p><u>Regional Emissions Budgets</u></p> <p><u>NOx: 73 tons/day</u></p> <p><u>VOCs: 55 tons/day</u></p> <p><u>Southern Sub-Regional Emissions Budgets</u></p>

<u>EPA's determination of adequacy for transportation conformity purposes)</u>	<u>NOx: 61 tons/day</u> <u>VOCs: 47 tons/day</u> <u>Northern Sub-Regional Emissions Budgets</u> <u>NOx: 12 tons/day</u> <u>VOCs: 8 tons/day</u>
<u>Denver Metro Area/North Front Range 8-Hour Ozone Nonattainment Area (for the 2008 8-Hour Ozone NAAQS; these emissions budgets will supersede the previous emissions budgets upon the effective date of EPA's determination of adequacy for transportation conformity purposes)</u>	<u>Regional Emissions Budgets</u> <u>NOx: 21.7 tons/day</u> <u>VOCs: 27.0 tons/day</u> <u>Southern Sub-Regional Emissions Budgets</u> <u>NOx: 18.3 tons/day</u> <u>VOCs: 23.0 tons/day</u> <u>Northern Sub-Regional Emissions Budgets</u> <u>NOx: 3.4 tons/day</u> <u>VOCs: 4.0 tons/day</u>
<u>Denver Metro Area/North Front Range and northern Weld County Ozone Nonattainment Area (for the 2015 8-Hour Ozone NAAQS; these emissions budgets will supersede the previous emissions budgets upon the effective date of EPA's determination of adequacy for transportation conformity purposes)</u>	<u>Regional Emissions Budgets</u> <u>NOx: 31.6 tons/day</u> <u>VOCs: 35.2 tons/day</u> <u>Southern Sub-Regional Emissions Budgets</u> <u>NOx: 26.8 tons/day</u> <u>VOCs: 30.0 tons/day</u> <u>Northern Sub-Regional Emissions Budgets</u> <u>NOx: 4.8 tons/day</u> <u>VOCs: 5.2 tons/day</u>
<u>Aspen Attainment/Maintenance Area</u>	<u>PM10 2023 and Beyond: 1,146 lbs./day</u>
<u>Cañon City</u>	<u>PM10 2020 and Beyond: 1,613 lbs./day</u>
<u>Lamar (Modeling Area)</u>	<u>PM10 2025 and Beyond: 764 lbs./day</u>
<u>Pagosa Springs (Modeling Area)</u>	<u>PM10 2021 and Beyond: 946 lbs./day</u>
<u>Steamboat Springs (Modeling Area)</u>	<u>PM10 2015 through 2023: 21,773 lbs./day</u> <u>PM10 2024 and Beyond: 1,103.2 lbs./day</u>
<u>Telluride (Modeling Area)</u>	<u>PM10 2021 and Beyond: 1,008 lbs./day</u>
<u>Longmont Attainment/Maintenance Area</u>	<u>Carbon Monoxide 2010 through 2014: 43 tons/day 2015-2019: 43 tons/day 2020 and Beyond: 43 tons/day</u>
<u>Colorado Springs Attainment/Maintenance Area</u>	<u>Carbon Monoxide 2010 and Beyond: 531 tons/day</u>
<u>Ft. Collins Attainment/Maintenance Area</u>	<u>Carbon Monoxide 2005 through 2009: 99 tons/day 2010 through 2014: 98 tons/day 2015 and Beyond: 94 tons/day</u>

Greeley Area Attainment/Maintenance Area	<u>Carbon Monoxide</u> 2005 through 2009: 63 tons/day2010 through 2014: 62 tons/day2015 and Beyond: 60 tons/day
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V.A.2. Geographic Coverage

Unless otherwise specified, the geographic coverage of each of the area Motor Vehicle Emissions Budgets shall be the nonattainment or attainment maintenance area as defined in the respective state implementation plans.

V.A.3. The Motor Vehicle Emissions Budget for PM10 applies to total primary PM10 emissions, including emissions from tailpipe exhaust, unpaved roads (except for the Denver PM10 nonattainment area), re-entrained road dust and street sand. It does not include precursor or secondary emissions, which, where appropriate, are covered under separate budgets.

V.A.4. Effective Dates

V.A.4.a. Denver Carbon Monoxide

The 1,520 tons per day (2013 and beyond) carbon monoxide emission budget established in Section V.A.1. shall take effect as a matter of state law when such budget takes effect as a matter of federal law pursuant to 40 CFR Section 93.118. Until such time as the 1,520 tons per day budget takes effect pursuant to this section and 40 CFR Section 93.118, the carbon monoxide emission budgets for the Denver CO attainment/maintenance area shall be 800 tons per day (2002 and beyond).

V.A.4.b. Colorado Springs Carbon Monoxide

The 531 tons per day carbon monoxide emission budget established in Section V.A.1. shall take effect as a matter of state law when such budget takes effect as a matter of federal law pursuant to 40 CFR Section 93.118. Until such time as the 531 tons per day budget takes effect pursuant to this section and 40 CFR Section 93.118, the carbon monoxide emission budget for the Colorado Springs CO attainment/maintenance area shall be 270 tons per day (2001 and beyond).

V.A.4.c. Reserved

V.A.4.d. Reserved

V.A.4.e. Aspen PM10

The 16,244 pounds-per-day PM10 emission budget established in Section V.A.1. shall take effect as a matter of state law when such budget takes effect as a matter of federal law pursuant to 40 CFR Section 93.118. Until such time as the 16,244 pounds-per-day budget takes effect pursuant to this section and 40 CFR Section 93.118, the PM10 emission budget for the Aspen PM10 Nonattainment Area shall be 13,974 pounds-per-day.

V.A.4.f. Pagosa Springs PM10

The 946 pounds-per-day PM10 emission budget established in Section V.A.1. shall take effect as a matter of state law when budget takes effect as a matter of federal law

pursuant to 40 CFR Section 93.118. Until such time as the 946 pounds-per-day budget takes effect pursuant to this section and 40 CFR Section 93.118, the PM10 emission budget for the Pagosa Springs PM10 attainment/maintenance area shall be 7,486 pounds-per-day.

V.A.4.g. Cañon City PM10

The 1,613 pounds-per-day PM10 emission budget established in Section V.A.1. shall take effect as a matter of state law when such budget takes effect as a matter of federal law pursuant to 40 CFR Section 93.118. Until such time as the 1,613 pounds-per-day budget takes effect pursuant to this section and 40 CFR section 93.118, the PM10 emission budget for the Cañon City PM10 attainment/maintenance area shall be 7,439 pounds-per-day.

V.A.4.h. Lamar PM10

The 764 pounds-per-day PM10 emission budget established in Section V.A.1. shall take effect as a matter of state law when such budget takes effect as a matter of federal law pursuant to 40 CFR Section 93.118. Until such time as the 764 pounds-per-day budget takes effect pursuant to this section and 40 CFR Section 93.118, the PM10 emission budget for the Lamar PM10 Nonattainment Area shall be 7,534 pounds-per-day.

V.A.4.i. Steamboat Springs PM10

The 21,773 pounds-per-day PM10 emission budget established in Section V.A.1. shall take effect as a matter of state law when such budget takes effect as a matter of federal law pursuant to 40 CFR Section 93.118. Until such time as the 21,773 pounds-per-day budget takes effect pursuant to this section and 40 CFR Section 93.118, the PM10 emission budget for the Steamboat Springs PM10 Nonattainment Area shall be 20,682 pounds-per-day.

V.A.4.j. Telluride PM10

The 1,108 pounds-per-day PM10 emission budget established in Section V.a.1. shall take effect as a matter of state law when such budget takes effect as a matter of federal law pursuant to 40 CFR Section 93.118. Until such time as the 1,108 pounds-per-day budget takes effect pursuant to this section and 40 CFR Section 93.118, the PM10 emission budget for the Telluride PM10 Attainment Area shall be 10,001 pounds-per-day (2012 and beyond).

V.B. Reserved

V.C. Additional Requirements for the Denver PM10 Attainment/Maintenance Area

V.C.1. Geographic Coverage

The geographic coverage for the Denver PM10 Motor Vehicle Emissions Budget is the modeling domain contained in the most recent revision to the Denver PM10 state implementation plan and technical support documentation, which are available for inspection at the offices of the AQCC located at 4300 Cherry Creek Drive South, Denver, Colorado.

V.C.2. Regional Emissions Analysis

The emissions budgets set out in this section shall be used for regional emissions analyses required for conformity determinations.

V.D. Additional Requirements for the Denver CO Attainment/Maintenance Area

V.D.1. Geographic Coverage

The geographic coverage for the Denver CO Motor Vehicle Emissions Budget is the Denver CO attainment/maintenance area as defined in the section of this Ambient Air Standards regulation entitled "Description of Boundaries for Denver CO Attainment/Maintenance Area."

VI. Carbon Monoxide Standard within the Eisenhower Tunnel" (State Only)

Pursuant to the authority of Section 25-7-106 (1), (b) and (c) and of 25-7-107 (1), (a), and (b) of Colorado Revised Statutes 1973, the Colorado Air Pollution Control Commission designated and confines of any traveled portions of the roadways within the Eisenhower Tunnel as a control area in which the adoption and maintenance of an ambient air standard is deemed necessary with particular identification of "carbon monoxide" as the pollutant hereby made subject to the following standard to maintain an acceptable human carboxyhemoglobin level: the ambient air within the Eisenhower Tunnel shall be maintained so that the levels of carbon monoxide shall not exceed a 15 minute average of 100 parts per million volume (115 milligrams per cubic meter at 760 Torr and 25 degrees Celsius) concentration.

* Carbon Monoxide/Eisenhower Tunnel: Adopted: 9/5/75 Effective: 12/17/75

Method of Testing:

1. For the purpose of this regulation, primary determinations of CO shall be made by use of instrumentation based on non-dispersive infrared spectrophotometry (NDIR), as specified in Federal Register, 36 (84), 8194-8195 (30 April, 1971), Appendix C. Other methods equivalent, in accuracy, precision, and freedom from interferences may be used if approved in advance by the Air Pollution Control Division.
2. Routine monitoring of CO may be performed by instruments based on other principles, provided that such instruments are demonstrated to yield results equivalent to measurements by NDIR. methods, within the limits of accuracy and precision approved in advance by the Air Pollution Control Division.
3. Instruments used for primary determinations and routine monitoring shall be maintained to at least the minimum standards recommended by their manufacturers. Calibrations shall be made at the location of use according to the procedures set out in "Guidelines for Development of a Quality Assurance Program: Reference Method for the "Continuous Measurement of Carbon Monoxide in the Atmosphere", EPA-R4-028A, June 1973, pp. 8-20.
4. Records of maintenance and calibrations of all instruments shall be kept in a current, timely manner. The sources and identifications of gas mixtures used in calibrations shall be entered in records of calibration. These records of calibration and summaries of operating CO levels shall be made available within 30 days after the end of the calendar quarter to the Air Pollution Control Division for review.

VII. Rationale

VII.A. Rationale for the Promulgation of Ambient Air Quality Standards for Sulfur Dioxide

The Commission's review of the large volume of scientific data presented at the hearings led to several conclusions relevant to the establishment of appropriate ambient air quality standards for the State of Colorado. Sulfur dioxide is a colorless, irritating gas with a taste threshold on the order of 600 to 800 micrograms per cubic meter and an odor threshold approximately twice that value. It is converted in the atmosphere (at a presently undetermined rate) into particulate sulfuric

acid droplets, and solid metallic sulfates. The hazards to human health of such sulfates are presently under extensive investigation by EPA and a broad section of the scientific community.

This Commission has not considered the question of health impacts of particulate surfaces in its adoption of ambient air standards for Colorado except to note that the information available is often conflicting and confusing. The same remarks are applicable to the effect of particulate sulfates on visibility. The Commission is very much aware that many have questioned the validity of EPA primary and secondary sulfur dioxide standards to protect humans, and animals, and vegetation with regard to (a) long term exposure to low concentrations of sulfur dioxide, (b) effects of altitude on atmospheric conversion of sulfur dioxide and attendant sulfate hazards, and (c) synergistic action of sulfur dioxide with other pollutants on vegetation.

The concerns of this Commission with regard to such considerations has led to the adoption of ambient air standards more restrictive than the EPA primary and secondary standards because: (1) the Commission is charged under the Colorado Air Pollution Control Act of 1970 with the achievement of the maximum practical degree of air purity throughout the State, (2) the evidence presented before this Commission and the evaluation conducted by the Commission and its staff raises serious unanswered questions about the possible effect of long term exposure of certain low levels of sulfur dioxide on vegetation and on the agricultural industry in our State, (3) the Commission desired to ensure that the policy of this State with regard to maximization of air purity and the Federal Prevention of Significant Deterioration policies, under which Colorado desires to seek delegation of authority, will be realized with regard to existing air quality in Colorado for sulfur dioxide which is generally very good.

Under the Prevention of Significant Deterioration doctrine, EPA has adopted sulfur dioxide ambient air quality standards in three classes. Class I preserves the pristine quality of pristine air. Class II permits moderate deterioration, and Class III sets an absolute limit at the Federal secondary standard (that ambient air standard designed to protect human welfare). The evidence received by this Commission was overwhelming in its support of the preservation of pristine conditions in National Parks, National Monuments, Wilderness and Primitive Areas, and the Gunnison Gorge Recreation area. It is logical to apply the EPA Prevention of Significant Deterioration Class I standards to these regions, to protect the air quality for intrusion by external sources, and no submission by any industrial representative in these public hearings opposed the use of the Federal Class I standards for the areas noted above.

The Commission has discovered no adequate rationale for adoption of the (EPA) PSD Class III standard for sulfur dioxide. This Commission questions the need for authorization of such concentrations of sulfur dioxide in the State of Colorado. Existing conditions in Colorado do not appear to even approach the Class I levels, and no proposal for development, as described by industrial representatives at the hearings, would be at all restricted by a standard more stringent than the Federal Class II standard. Therefore, Federal PSD Class II standards have been adopted as the Colorado Category III standards: proposed development of sulfur dioxide sources as presented to the Commission by a variety of industrial representatives, can proceed with much less impact than the Federal Class II for sulfur dioxide would allow. The Commission has thereby maintained consistency with Federal PSD requirements and feels that the State will be in a position in the near future to request delegation of authority from the Environmental Protection Agency for enforcement of PSD requirements.

The Colorado Category I standards for sulfur dioxide effective December 18, 1975 are very stringent ones, and because the bulk of the state is now designated as a Colorado Category I, certain proposed industrial development, as presented before this Commission and including energy conversion, might thereby be restricted. One proposed solution to this problem was redesignation to the Federal (PSD) Class II for the entire state. This concentration of sulfur

dioxide. As noted above, the Commission simply does not feel that such extreme degradation in existing air quality for sulfur dioxide throughout the entire state is necessary. It is not necessary, according to evidence presented to the Commission, to go to the Colorado Category II standards set forth under the 1975 regulation to permit projected new industrial development.

The Commission has therefore adopted a standard, which are essentially at the halfway mark between PSD Class I and PSD Class II. This standard does allow for all the proposed development of sulfur dioxide sources described in hearings before this Commission and is an acceptable one to the Commission because it will not prohibit development, with careful siting considerations, yet avoids the necessity for redesignation involving substantial deterioration of existing air quality for sulfur dioxide. It should be noted that, at the PSD Class II levels, many Colorado citizens might actually be physically affected by the unpleasant and irritating taste of sulfur dioxide in the ambient air.

All of the above-described ambient standards to be established by this Commission for sulfur dioxide, are incremental standards. However, the Commission also feels strongly that an absolute standard, and "under lid," should be placed on sulfur dioxide levels as well. It is the absolute concentration, rather than the increment, which affects human health, welfare, and the "quality of life" which our Colorado Air Pollution Control Act so clearly seeks to protect. In order to assure compliance with the policy of this state, this Commission has adopted a three-hour average concentration of sulfur dioxide, of 700 micrograms per cubic meter, as an absolute standard not to be exceeded more than once per year. This absolute standard is again related to that level of sulfur dioxide in the ambient air, which may cause obvious physical irritation for certain Colorado citizens. This Commission intends to protect those citizens and all other residents of our State from impairment of their general welfare, convenience, and enjoyment of the beauty of life, which Colorado has to offer.

Ambient air quality standards will play an important role in the permitting process, and since that process involves the application of predictive modeling all incremental standards should be considered significant only to one significant figure.

As noted above, Colorado Category I for sulfur dioxide has been designated for certain areas based on the evidence received at public hearing. The Commission has also provided for designation of any National Parks, Monuments, Wilderness or Primitive Areas or Wild and Scenic River Corridors, which may be established in Colorado in the future. Such designation will be made after Commission evaluation of the comments of members of the public at hearing.

The Commission, on the basis of broad support from industry and the general public, decided not to permit redesignation of the Category I areas. The Commission found that sufficient documentation should accompany a redesignation request to show that the request is serious, well thought out in its various implications, and has some public support. On the basis of considerable testimony, it also developed a set of criteria by which the redesignation request will be judged. The Commission thus concluded that all of these elements in the redesignation process must be met before the designation is granted.

VII.B. Rationale and Justification for Revision to the Ambient Air Quality Standards for Sulfur Dioxide Regarding the Method of Testing and Reporting (Section C)

This action brings the State of Colorado regulations into conformity with the Federal regulations for (a) the methods for measurements of ambient concentrations of sulfur dioxide and (b) the manner in which these concentrations are reported:

This question as to whether these concentrations should be expressed in (a) micrograms per actual cubic meter or (b) micrograms per standard cubic meter (at 25 degrees Celsius and one atmosphere) is not resolved. If the hazard is related to the ratio of sulfur dioxide to oxygen the standard cubic meter concentration is preferable. If the concentrations are expressed in micrograms per standard cubic meter, the equivalent expression in parts per million is independent of altitude and temperature; this is not true if the concentrations are given in

micrograms per actual cubic meter. The deciding issue in the decision was conformity with Federal Standards.

VII.C. Rationale and Justification for the Repeal and Readoption of Ambient Air Quality Standards for Total Suspended Particulates*

This action brings the State of Colorado Ambient Air Quality Standards for Total Suspended Particulates into conformity with the existing Federal Ambient Air Quality Standards for Total Suspended Particulates, and are the same standards, which are required to be met by 1982 by the Clean Air Act (1977 Amendments) and the Colorado State Implementation Plan.

Ambient Air Quality Standards play an important role in determining various aspects of the State air pollution permitting process and thus the adoption of State Ambient Air Quality Standards for Total Suspended Particulates identical to the Federal standards subjects applicants for an emission permit to only one standard, rather than different State and Federal Standard

The deciding issues in the decision were conformity with Federal standards and great public understanding.

* Rationale/TSP – Repeal and Readoption: Adopted 4/12/79

VIII. Statements of Basis, Specific Statutory Authority and Purpose

VIII.A. Emission Budgets for Nonattainment Areas in the State of Colorado

Adopted: February 16, 1995

Section 176(c) of the Federal Clean Air Act Amendments of 1990 requires that transportation plans and programs adopted by a metropolitan planning organization conform to the appropriate state implementation plan. Pursuant to EPA regulations implementing Section 176(c), mobile source emissions resulting from such plans and programs ultimately must be demonstrated, to be consistent with the motor vehicle emissions budget set forth in the applicable SIP. Without a clearly indicated intent otherwise, the SIP's highway and transit mobile source inventory serves as the motor vehicle emissions budget. However, where a SIP quantifies a "safety margin" by which emissions from all sources are less than would be consistent with attainment throughout the region, the State may submit a SIP revision which assigns some or all of this safety margin to the motor vehicle emissions budget for purposes of conformity determinations.

ADOPTION OF MOBILE SOURCE EMISSIONS BUDGETS FOR THE DENVER NONATTAINMENT AREA

A. PM10

The Denver PM10 SIP, which originally was submitted prior to EPA's adoption of the conformity regulations in November 1993, does not have mobile source emissions budgets explicitly labeled. The Denver PM10 SIP adopted by the Air Quality Control Commission on October 20, 1994 notes the intent to establish specific mobile source emissions budgets for both primary PM10 emissions and emissions of PM10 precursors. The Regional Air Quality Council proposed and the Air Quality Control Commission adopted a regional PM10 emissions budget that allocates some of the "safety margin" in regional emissions to the mobile source emissions budget for purposes of conformity.

1. Establishing the Primary PM10 Budget

The attainment demonstration for the Denver PM10 SIP indicates that modeled concentrations approaching the federal PM10 health and welfare standard are limited to a very small portion of the

Denver region centered along the 1-25 corridor generally between Broadway and 1-70. The remainder of the region is well below the federal standard.

Thus, while the mobile source inventory in the central Denver area is at the Maximum consistent with meeting the health and welfare standards, on a regional basis there is a "safety margin" by which emissions from all sources in the region are less than the total emissions that would be consistent with attainment of the PM10 health and welfare standard.

In order to determine how much of the regional emissions "safety margin" to assign to the mobile source emissions budget, the RAQC used DRCOG's transportation network as defined by the 2015 Interim Regional Transportation Plan and projections of vehicle miles traveled ("VMT") as the basis for the analysis in order to determine how much of the anticipated mobile source emission growth can be accommodated in the revision while still maintaining the federal PM10 health and welfare standard. The emissions from the 2015 network and its resulting VMT were estimated for each modeling grid based on the primary PM10 emissions factors for tailpipe exhaust, re-entrained road dust and street sand used in the PM10 SIP. The resulting gridded emissions from the network were then modeled using the same dispersion model used for the PM10 SIP. The analysis then identified any areas where the increased emissions resulted in predicted concentrations greater than the federal standard of 150/ $\mu\text{g}/\text{m}^3$.

Emissions in these areas were then reduced sufficiently so that no values above the federal standard were predicted. The sum of the total emissions in the geographic area modeled, taking in to account emission reductions needed to assure that PM10 health and welfare standards were met, was then established as the PM10 mobile source emissions budget set forth in the Ambient Air Standards rule. That budget applies as a ceiling on emissions for each identified year.

The AQCC is aware that EPA is under court order to reconsider the PM10 national ambient air quality standard, and that EPA is actively considering revision of the particle size indicator and mass concentration of current standard. The AQCC considers this an interim budget that will be replaced by a 44-ton budget in 1998. This will give the AQCC an opportunity to develop and review a long range, comprehensive air quality management plan that will set the air quality goals and agenda for the Denver region over the next 20 years. The AQCC anticipates that the mobile source emissions budget in the long range, comprehensive air quality plan will not exceed 44 tons per day. The notice for the hearing on the long range, comprehensive air quality plan will also include a notice for rule making on the mobile source emissions budget.

2. Development of Control Measures

The PM10 SIP includes all control measures necessary to achieve the emissions budget levels for 1995 through 1997 and to ensure that localized violations of the national ambient air quality standard for PM10 will not develop prior to December 31, 1997. However, as the SIP does not extend beyond 1997, it does not include the control measures that may be necessary to achieve later budgeted levels. Additional control measures to reduce mobile source emissions in the years beyond 1997 must become enforceable as set forth in the Ambient Air Standards rule before an MPO may rely on any such reductions in assessing conformity of a future plan or program with the mobile source emissions budgets. This will ensure that no local violations of the national standard will result beyond 1997.

B. *PM10 Precursors*

The Motor Vehicle Emissions Budget for PM10 applies to total primary PM10 emissions and does not include precursor or secondary emissions. A separate Motor Vehicle Emissions Budget for emissions of nitrogen oxides as a precursor to PM10 is established by this Regulation. Available information indicates that SO₂ emissions from mobile sources are an insignificant contributor to secondary particulate formation in the Denver area. Therefore, a Motor Vehicle Emissions Budget for SO₂ is not established.

C. Carbon Monoxide

The RAQC recommended and the AQCC adopted as the Motor Vehicle Emissions Budget for 1995 through 1999 the Denver Nonattainment Area Carbon Monoxide ("CO") SIP's estimation of regional mobile source emissions that will result after implementation of the base programs and measures set forth in Chapter V of the SIP. These measures include 2.7% oxygenated gasoline, the first year of the Enhanced Inspection and Maintenance Program, and the base transportation system network that is in place or will be completed by 1995. For purposes of determining conformity, the budget of 1125 tons per day will remain in effect until the attainment budget takes effect in 2000.

The RAQC recommended establishing the CO mobile source emissions budget for the year 2000 and beyond at 825 tons per day, the level of emissions necessary to demonstrate attainment of the federal CO standard. The AQCC chose to adopt a budget of 808 tons per day when the Denver CO SIP was adopted on June 16, 1994. As part of this Regulation, the RAQC and DRCOG recommended adoption of the originally recommended CO Mobile Vehicle Emissions Budget of 825 tons per day.

D. Specific Statutory Authority

The specific statutory authority for this rule is set out at § 25-7-105(1)(a), C.R.S.

VIII.B. Ozone Redesignation and the Adoption of the Mobile Source Emissions Budgets for Ozone Precursors: VOC and NO_x

Adopted: March 21, 1996

The Denver metropolitan area was designated as nonattainment area by the EPA in 1978 for violations of the Ozone National Ambient Air Quality Standard (NAAQS). Pursuant to 185A of the 1990 amendments to the federal Clean Air Act (CAA), the Denver Metro Area was classified as a transitional nonattainment area. The Denver metropolitan area has demonstrated through quality-assured, monitored data from 1993 through 1995 that it has attained the ozone NAAQS. The Regional Air Quality Council has compiled the documentation required by Section 107(d)(3)(E) of the CAA to request redesignation to attainment status.

Included in the requirement for redesignation is a fully approved Maintenance Plan that meets Section 175A of the CAA. Upon approval by the EPA, the Maintenance Plan will become an element of the Colorado State Implementation Plan. The maintenance demonstration was based on future inventories that assumed the continuance of existing VOC controls in the Denver metro area. Such controls include the continued application of Regulation Number 7 to the Denver area.

Federal law does not require the redesignation of the Denver nonattainment area. However, such redesignation is required by state law. Section 25-7-107(2.5). The changes to the Ambient Air Quality Standard regulation are consistent with continued maintenance of the ozone standard and are not otherwise more stringent than the relevant federal requirements.

Classification of the Denver metropolitan area

Upon redesignation by the EPA, the classification of the Denver metro area will change from "transitional" to "attainment" for the ozone NAAQS. The Regional Air Quality Council recommended and the Commission adopted a change in classification for the Denver Metro area to attainment maintenance reflecting this change in status. In addition, the boundaries of the attainment maintenance are redefined and a map depicting the boundaries is noted. The boundaries and map are the same as the present Denver metro nonattainment area.

The specific statutory authority to redesignate the area is set out in §§25-7-105(1)(a)(I) and (2), -106(1)(a); -107(1) and (2.5); and 25-7-301.

Adoption of mobile source emissions budgets

Section 176(c) of the CAA requires that transportation plans and programs adopted by a metropolitan planning organization conform to the appropriate state implementation plan. Pursuant to EPA regulations implementing Section 176(c), mobile source emissions resulting from such plans and programs ultimately must be consistent with the motor vehicle emissions budget set forth in the applicable SIP.

Without clearly indicated intent otherwise, the SIP's highway and transit mobile source inventory serves as the motor vehicle emissions budget. However, where a SIP quantifies a "safety margin" by which emissions from all sources are less than would be consistent with attainment throughout the region, the state may submit a SIP revision which assigns some or all of this safety margin to the motor vehicle emissions budget for the purposes of conformity determinations.

The most recent revisions to the Denver Ozone SIP were submitted in 1989 and 1990, which was prior to EPA's adoption of the conformity regulations in November 1993, and those revisions did not include explicitly labeled mobile source emissions budgets. The Denver Ozone Maintenance Plan adopted March 21, 1996 notes the intent to establish specific mobile source emissions budgets for the two ozone precursor gases, volatile organic compounds (VOC) and nitrogen oxides (NO_x).

The Regional Air Quality Council proposed, and the Commission adopted regional VOC and NO_x emissions budgets as provide in the rule. Such budgets allocate the "safety margin" in regional emissions to the mobile source emissions budget for purposes of conformity. The specific statutory authority to establish such budgets is set out in §25-7-105(1)(a)(I).

Establishing ozone precursor budgets

The attainment demonstration is based on monitored data, which demonstrates attainment of the NAAQS during the three-year period, 1993-95. The attainment inventory is the baseline VOC and NO_x inventory calculated for the 1993 year. The maintenance demonstration for the Denver Ozone Maintenance Plan is based on the future projected VOC and NO_x maintenance year (2010) inventory being less than or equal to the respective, VOC or NO_x attainment year (1993) inventory. The projected 2010 inventories take into account projected growth, existing state and local control strategies and additional federal measures and standards mandated by the Clean Air Act Amendments of 1990.

The total 2010 inventory for either precursor does not exceed the total 1993 inventory, therefore demonstrating maintenance of the NAAQS through the year 2010. Then inventory provides a "margin of safety", since the 2010 VOC inventory is about 33 tons per day less than the 1993 attainment inventory and the 2010 NO_x inventory is about 14 tons per day less than the 1993 attainment inventory.

The emissions budget applies as a ceiling on emission in the year for which it is defined and for all subsequent years until another milestone year for which a different budget is defined.

Adopted ozone precursor budgets

The Regional Air Quality Council recommended that the Commission adopt mobile source emission budgets for ozone precursors, VOC and NO_x to include the available safety margin in 1993 and in 2010 and beyond.

The adopted mobile source emissions budget is 124 tons per day for VOC in 1993 and 2010 and beyond. For NO_x the budget is 139 tons per day for 1993, and 135 tons per day is adopted for 2010 and beyond.

Findings required pursuant to § 25-7-110.8

The Commission determines that:

1. The emission inventory and the maintenance demonstration that support the redesignation request are based on reasonably available, validated and sound scientific methodologies. Such inventory and maintenance demonstration were prepared by the Regional Air Quality Council and have been reviewed by the Division. Any validated and sound scientific methodologies and information made available by interested parties has been considered.
2. The rule is administrative in nature in that it redesignates the area as an attainment maintenance area, and will not result in any further reduction in air pollution beyond those reductions that are currently being achieved.
3. The alternative chosen by the Commission is the most cost-effective, provides the regulated community flexibility, and achieves the necessary reduction in air pollution.
4. The alternative chosen by the Commission will maximize the air quality benefits in the most cost-effective manner.

VIII.C. Redesignation of the Greeley Carbon Monoxide Nonattainment Area to Attainment/Maintenance

Adopted: September 19, 1996

This Statement of Basis, Specific Statutory Authority and Purpose complies with the requirements of the Administrative Procedures Act, Section 24-4-103, C.R.S., and the Colorado Air Pollution Prevention and Control Act, Section 25-7-110.5, C.R.S.

Basis

Greeley carbon monoxide (CO) nonattainment area has not exceeded the National Ambient Air Quality Standards for CO since 1988. Therefore, the area is eligible for redesignation to attainment status under Section 107 of the federal Clean Air Act. The State of Colorado is formally requesting redesignation, and the adopted redesignation request and maintenance plan for the area will become part of the State Implementation Plan (SIP) upon approval by the U.S. Environmental Protection Agency. The *Ambient Air Quality Standards for the State of Colorado* regulation must be revised to reflect the requested redesignation.

Authority

Specific authorities for revising the Ambient Air Quality Standards rule to reclassify the area to attainment are contained in the Colorado Air Pollution Prevention and Control Act, Sections 25-7-105 (1) and (2), 25-7-106(1)(a), and 25-7-107(1), (2.5), and (4). Additional authorities are contained in Sections 25-7-302 regarding SIP contents and 25-7-109 (2)(c) regarding the authority to regulate CO.

Purpose

The revisions to the Ambient Air Quality Standards regulation will implement the redesignation of the Greeley CO nonattainment area to attainment. The rule revisions become effective upon EPA's approval of the redesignation request and the accompanying maintenance plan. The purpose of this delay in the effective date of this rule revision is to comply with the requirement of 175 A(c) that all applicable nonattainment area requirements shall remain in place pending EPA approval. The changes to the Ambient Air Quality Standards regulation are as follows:

1. Revise the classification of the area to "Attainment/Maintenance"; and
2. Update the map of the area with a more legible version (the boundaries of the area remain unchanged).

The overall effect of these rule changes will be to relax some of the applicable requirements for stationary source permitting and for transportation planning. These amendments to the rules are not specifically intended to reduce air pollution and, therefore, the findings of Section 25-7-110.8(1) C.R.S. are inapplicable.

Federal Requirements

Redesignation to an attainment area is authorized but not strictly required by the federal Act. However, expeditious action to redesignate the area as an attainment area is required by Section 25-7-107(2.5) C.R.S. In order to be meaningful, such a redesignation must be submitted to the EPA as a SIP revision. The rule amendments are not otherwise more stringent than the requirements of the federal Act.

VIII.D. Steamboat Springs PM10 State Implementation Plan Element

Adopted: October 17, 1996

This Statement of Basis, Specific Statutory Authority, and Purpose complies with the requirements of the Administrative Procedures Act, Section 24-4-103 C.R.S. and the Colorado Air Pollution Prevention and Control Act, Section 25-7-110.5, C.R.S.

Basis

Section 172 of the federal Clean Air Act requires that control measures and contingency measures be adopted as part of nonattainment area state implementation plans. The Colorado Attorney General's Office has determined that any emission control measure for a nonattainment area must be adopted as a State regulation in order for the measure to be enforceable by the State of Colorado.

The Steamboat Springs area is designated as nonattainment for fine particulate matter (PM10). In the Steamboat Springs State Implementation Plan (SIP) Element (September 1995), the State of Colorado committed to adopt additional control measures that allow the area to demonstrate continued maintenance of the PM10 National Ambient Air Quality Standards (NAAQS), and contingency measures that could be implemented in the future if the area fails to attain the PM10 NAAQS by the required date. The *State Implementation Plan-Specific Regulations for Nonattainment Areas* has been revised to include these measures. Also, the *Ambient Air Quality Standards for the State of Colorado* regulation has been revised to reflect the correct name of the nonattainment area and to include emission budgets that are utilized in transportation planning efforts.

Authority

General authority for revising the *Ambient Air Quality Standards...* to change the name of the nonattainment area and to adopt the emission budgets is contained in the Colorado Air Pollution Prevention and Control Act, Section 25-7-105 (1). General and specific authorities for revising the *SIP-Specific Regulations...* to adopt the emission control measures and the contingency measures are contained in Sections 25-7-105 (1), 25-7-106(1)(c), and 25-7-109(1) and (2).

Purpose

Administrative changes to the *Ambient Air Quality Standards...* regulation are as follows:

1. Revise the name of the nonattainment area from "Routt County" to "Steamboat Springs", making the regulation consistent with the Steamboat Springs PM10 SIP Element; and
2. Establish PM10 mobile source emission budgets for Steamboat Springs modeling area for the periods "1999-2001" and "2002 and Beyond" for use in making transportation conformity determinations.

Paved road dust is a primary source of PM10 emissions in the Steamboat Springs nonattainment area. Revisions to the *SIP-Specific Regulations...* to control paved road dust are as follows:

1. The previously adopted "one percent" specification for fine materials contained in street sand is changed to "two percent". This change was originally requested by the City of Steamboat Springs in order to provide the City with the maximum flexibility for providing safe streets during winter driving conditions. This revision will increase PM10 emissions, but the increase is more than offset by the street sweeping activities described below.
2. In order to show continued attainment and maintenance of the PM10 National Ambient Air Quality Standards (NAAQS), the City of Steamboat Springs must increase the frequency of street sweeping on Lincoln Avenue. Sweeping must occur at least once each day following each street sanding deployment (weather and road conditions permitting) until the City has swept Lincoln Avenue at least four times, instead of once after each sanding deployment as previously required. The City requested this increase in sweeping frequency in order to compensate for increased emissions that resulted from changing the street sand specification, and to provide emission reductions necessary to demonstrate continued maintenance with the PM10 NAAQS.
3. Within two months following a determination that the Steamboat Springs nonattainment area has failed to attain the PM10 NAAQS or show reasonable further progress, the City must sweep additional sections of Lincoln Avenue and all other City streets within a defined area of central Steamboat Springs within four days following each street sanding deployment (weather and road conditions permitting). This sweeping constitutes the federally required contingency measures for the Steamboat Springs nonattainment area.

Findings

The Air Quality Control Commission makes the following findings pursuant to C.R.S. Section 25-7-110.8(1).

First, the rule revisions are based on reasonably available, validated, reviewed and sound scientific methodologies. The emission inventories that establish the emission budgets, and the monitoring, inventories, and dispersion modeling that indicate the need for control measures and their effectiveness in reducing PM₁₀ emissions, were developed/performed in accordance with published guidance from EPA. Monitoring activities in Steamboat Springs are conducted in compliance with the EPA regulations of 40 CFR Part 58. Emission inventories were developed in accordance with EPA guidance found in "AP-42", the "SIP Development Guideline Document", and the "Control of Open Fugitive Dust" document. Dispersion modeling using the "WYND valley" model was performed in accordance with EPA's "Supplement B to the Guideline on Air Quality Models".

Second, the street sweeping revisions to the *SIP-Specific Regulations...* shall result in a demonstrable reduction in air pollution due to the removal of street sand and background paved road dust from the streets. The amount of reductions relied upon in the SIP Element's attainment demonstration are supported by the EPA guidance documents cited above. The emission budgets in the *Ambient Air Quality Standards...* regulation will result in PM₁₀ emission reductions in the area by limiting growth from the mobile sources sector to 2002 levels (for the purposes of "transportation conformity" determinations - federal transportation conformity regulations of 40 CFR Subpart T). As a result, federally funded or approved projects will have to offset any additional growth in mobile source emissions.

Third, street sweeping is cost-effective in this case because the City is already conducting some of the sweeping in this rule. Other alternatives, such as alternative deicers and sand reduction plans, were not considered viable because of concerns about public safety during winter driving conditions. The potentially lower cost alternative of one percent fines was not adopted because the City of Steamboat Springs preferred this control measure.

Therefore, it is assumed that the street sweeping controls and the emission budget are the most cost effective alternative, and the rule revisions maximize air quality benefits in the most cost effective manner.

Federal Requirements

The adoption of control measures, contingency measures, and emission budgets are required by federal regulations, and the federal regulations allow the State flexibility in determining what the measures and budgets should be. These measures and budgets will be submitted to the EPA as a SIP revision. The rule amendments are not otherwise more stringent than the requirements of the federal Act.

VIII.E. Redesignating Cañon City/Fremont County PM₁₀ Nonattainment Area to Attainment and Establishing a New Emissions Budget for the area for 1997 through 2015.

Adopted: October 17, 1996

Background

This statement of Basis, Specific Statutory Authority and Purpose complies with the requirements of the Administrative Procedures Act, C.R.S. 1973, Section 24-4-103(4) for adopted or modified regulations. Because the Cañon City/Fremont County nonattainment area qualifies for redesignation to attainment/maintenance status, continuation of "nonattainment" status would keep in effect unnecessarily burdensome requirements for the area's the public and private sectors. Rule changes corresponding to redesignation are not more stringent than federal requirements.

Basis

The Cañon City/Fremont County PM10 Nonattainment area has never violated the National Ambient Air Quality Standards for PM10, and has not had an exceedance in eight years (since May of 1988). Therefore, the area is eligible for redesignation to attainment status under Section 107 of the federal Clean Air Act as amended. Colorado is formally requesting redesignation and proposing a maintenance plan for the area, which will become that area's portion of the State Implementation Plan (SIP) upon USEPA approval. The *Ambient Air Standards for the State of Colorado* rule must be revised to reflect the SIP changes.

Authority

General authority for the *Ambient Air Standards* rule is contained in the Colorado Air Pollution Prevention and Control Act. Sections 25-7-105 (1) and (2). Specific authority is found at Sections 25-7-107 (2.5), regarding expeditious redesignation; and 25-7-302, regarding SIP contents. Commission action in promulgating these revisions is taken pursuant to Sections 25-7-105(1)(a), regarding establishment of emissions budgets; 25-7-106 (1)(a), regarding redesignations; 25-7-109(2)(b), regarding the authority to regulate particulate matter.

Federal Requirements

Redesignation to an attainment area is authorized but not strictly required by the federal act. However, expeditious action to redesignate the area as an attainment area is required by State statute (25-7-107(2.5)). In order to be meaningful such redesignation must be submitted to EPA as a SIP revision, and, in fact, Section 25-7-107(4) compels that it be submitted to EPA. Federal law requires the establishment of a motor vehicle emissions budget in the SIP, either explicitly by identifying such an emissions budget or implicitly in the maintenance demonstration. The emissions budget required by Federal law must be consistent with the maintenance of the NAAQS. This rule explicitly establishes such an emissions budget as a regulation as required by 24-4-103(1), C. R.S. The motor vehicle emissions budget established in the rule is consistent with continued maintenance of the NAAQS and therefore complies with, and does not exceed, this federal requirement.

Purpose

Expeditious action to redesignate to attainment status is taken pursuant to 27-7-107(2.5), C.R.S. The proposed revisions to the *Ambient Air Standards for the State of Colorado* would implement changes to be made to the State Implementation Plan via redesignation to attainment for PM10 and adoption and approval of the maintenance plan for the Cañon City/Fremont County area. The rule revisions would relax certain requirements for the area. The purpose of an increased mobile source emissions budget is to provide greater flexibility in making transportation conformity findings, and to maintain a reasonable margin for accommodation of uncertainty and future growth. NOTE: Excepting the increase in the area's mobile source emissions budget, the rule revisions would take effect only upon published USEPA approval of redesignation and of the maintenance plan. The changes to the *Ambient Air Standards* would be as follows:

1. Page 12: Changing the Cañon City/Fremont County classification from "Moderate" (nonattainment area) to: "Attainment/Maintenance" for the PM10 NAAQS. This change does not take effect until request/plan is approved by USEPA.
2. Map page 19: Changing the Cañon City/Fremont County area map from "nonattainment" to "attainment/maintenance" for PM10. This change does not take effect until request/plan is approved by USEPA.

3. Page 23: Motor Vehicle Emission Budget for the area would increase from 5,130 lbs./day to 7,439 lbs./day for 1997 and beyond.

Overall Effect

The overall effect of these rule changes will be to relax the applicable regulations. These amendments to the rules are not specifically intended to reduce air pollution and, therefore, the findings in 25-7-110.8(1) are inapplicable.

VIII.F. Longmont Nonattainment Area Redesignation as an attainment area for carbon monoxide (CO)

Adopted: December 18, 1997

Federal Requirements

42 USC § 7407 (d)(3) provides that the State may request redesignation to attainment status for areas of the State that qualify for such redesignation based on air quality data, planning and control considerations. In order for the EPA to approve of such a redesignation request, § 42 USC §§ 7407(d)(3) (E) and 7505a require the State to submit a maintenance plan that includes enforceable control measures, will provide for maintenance of the standard for ten years following the approval of the redesignation request, and that complies with the requirements of 42 USC § 7410.

EPA policy implementing federal law on maintenance plans gives the State a choice between two options. Under the first option, the State may develop a simplified maintenance plan based on a comparison of base-year and future-year emissions inventories. Such a maintenance plan is acceptable if the future-year emissions are less than the emissions in the base-year. However, this option is available only if the maintenance plan includes all of the control measures that were included in the attainment SIP for the area. Under the second option, the State may eliminate control measures from the maintenance plan, provided that the maintenance plan demonstrates maintenance of the NAAQS without such control measures. Such a maintenance demonstration must be supported by dispersion analysis or some other form of air quality modeling.

The rule change adopted by the Commission is based on a maintenance plan with a design value of 5.5 parts per million (ppm). This design value is well below the NAAQS of 9.0 ppm, and suggests that the State may be able to eliminate some control measures from the maintenance plan. However, the State has not performed the level of air quality modeling adequate to justify removal of control measures from the maintenance plan. Therefore, the State cannot use the second option at this time. The rule change is supported by a maintenance plan that is based on the first option. Such a maintenance plan must include all of the control measures that were included in the attainment SIP in order to comply with federal requirements. Furthermore, the State may not eliminate the oxygenated fuels program from the Longmont maintenance area because Longmont is part of the Denver consolidated metropolitan statistical area. 42 USC 7512a(b)(3). Therefore, the rule adopted by the Commission does not differ or exceed federal requirements.

Statutory Authority

Specific statutory authority for the redesignation of the Longmont area as an attainment area is provided in § 25-7-107(1).

Findings pursuant to § 25-7-110.8

The rule change adopted by the Commission on October 16, 1997 does not include the adoption of any additional control measures intended to reduce air pollution. The Commission's action merely changes the status of the Longmont nonattainment area, and assigns the safety margin to mobile sources. This rule change provides flexibility for the community by establishing a Basis for redesignation of the area as an attainment area, and by allocating the safety margin to the mobile source sector for purposes of transportation conformity determinations. In the meantime, the Commission has initiated a process for evaluating whether control measures such as the Automobile Inspection and Readjustment Program are still necessary to maintain the NAAQS for CO in Longmont and other communities in Colorado. In this way the rule change provides greater flexibility in the near term while the Commission continues to evaluate its options for reducing air pollution and maintaining the NAAQS in the most cost-effective manner.

The Commission has also considered the factors described in § 25-7-109(1)(b) in adopting these revisions.

VIII.G. Colorado Springs Nonattainment Area Redesignation as an attainment area for carbon monoxide (CO), and to establish an emissions budget that allocates a portion of the safety margin to the mobile source sector

Adopted: January 15, 1998

Federal Requirements

42 USC §7407(d)(3) provides that the State may request redesignation to attainment status for areas of the State that qualify for such redesignation based on air quality data, planning and control considerations. In order for the EPA to approve of such a redesignation request, § 42 USC §§7407(d)(3) ((E) and 7505a require the State to submit a maintenance plan that includes enforceable control measures, will provide for maintenance of the standard for ten years following the approval of the redesignation request, and that complies with the requirements of 42 USC §7410.

EPA policy implementing federal law on maintenance plans generally gives the State a choice between two options. Under the first option, the State may develop a simplified maintenance plan based on a comparison of base-year and future-year emissions inventories. Such a maintenance plan is acceptable if the future-year emissions are less than the emissions in the base-year. As a general rule, this option is available only if the maintenance plan includes all of the control measures that were included in the attainment SIP for the area.

However, pursuant to a memo the EPA sent the Division on October 10, 1997, the State was able to eliminate the Clean Air Campaign and RIDEFINDERS from the Colorado Springs carbon monoxide maintenance SIP by supplementing the emission inventory comparison with additional modeling. EPA concurred that these two SIP elements (RIDEFINDERS and the Clean Air Campaign) may be deleted in accordance with its maintenance SIP policy. Under the second option, the State may eliminate control measures from the maintenance plan, provided that the maintenance plan demonstrates maintenance of the NAAQS without such control measures. Such a maintenance demonstration must be supported by adequate air quality modeling or analysis.

There is reason to believe that the state may be able to eliminate either the oxygenated fuels program or the motor vehicle inspection and maintenance program, and still demonstrate maintenance of the NAAQS for carbon monoxide for the Colorado Springs area. However, the State has not performed the air quality modeling necessary to justify removal such control measures.

Therefore, the State cannot use the second option at this time. The rule change is supported by a maintenance plan that is based on the first option. Such a maintenance plan must include all of the control measures that were included in the attainment SIP in order to comply with federal requirements. EPA has concurred with the Division's and the Pikes Peak Area Council of Governments' inventory and supplemental modeling was adequate to support the removal of the RIDEFINDERS and Clean Air Campaigns from the Colorado Springs carbon monoxide maintenance SIP because these control strategies will not impact maintenance of the NAAQS.

Statutory Authority

Specific statutory authority for the redesignation of the Colorado Springs area as an attainment area is provided in §25-7-107(1).

Findings pursuant to §25-7-110.8

The rule change adopted by the Commission on January 15, 1998 does not include the adoption of any additional control measures intended to reduce air pollution. The Commission's action merely changes the status of the Colorado Springs nonattainment area, and allocates a portion of the safety margin in the year 2010 to the mobile source sector.

The redesignation of the area was based on reasonably available, validated, reviewed and sound scientific methodologies, which are described in the maintenance plan narrative and the Final Emission Inventories for the Colorado Springs, Colorado, Carbon Monoxide Nonattainment Area Redesignation Plan. Such documents have been available for public review in draft form for several months, and have been revised in response to comments and review. Final documents were available thirty days prior to the hearing.

The redesignation of the Colorado Springs area as an attainment area is the most cost-effective alternative. Such redesignation provides the regulated community with flexibility, yet maintains the National Ambient Air Quality Standard (NAAQS) for carbon monoxide.

Contested issues

The maintenance plan associated with the rule change does not include two control measures (RIDEFINDERS and the Clean Air Campaign) that were previously included in the State Implementation Plan (SIP). Several parties to the hearing objected to the removal of these measures from the SIP. The Commission voted to remove the RIDEFINDERS and the Clean Air Campaign from the mandatory sections of the SIP in deference to the request of the Pikes Peak Area Council of Governments, the lead air quality-planning agency for the Colorado Springs area, pursuant to CRS §25-7-105(1)(a)(II). These measures are not necessary to maintain the NAAQS and are not otherwise federally required. Therefore, pursuant to §25-7-105.1, these measures should not be included in the maintenance plan. Furthermore, these control measures were not implemented by rule. Accordingly no rule change is necessary to remove such measures from the SIP.

As indicated above, the Commission chose to redesignate the area by comparing the base-year and future-year inventories, and the Division did not perform air quality modeling adequate to justify the removal of the oxygenated fuels program from the SIP. Several parties urged the removal of the oxygenated fuels program from the plan. However, such revision of the plan would have delayed the redesignation of the area pending further air quality analysis, and would have required substantial revisions to the maintenance plan. The Colorado Springs area would remain a nonattainment area in the meantime.

The Commission has initiated a process for evaluating whether control measures such as the oxygenated fuels program and the Automobile Inspection and Readjustment (I/M) Program are still necessary to maintain the NAAQS for CO in the Colorado Springs area and other communities in Colorado. For these reasons, the Commission has decided to approve of the maintenance plan and to redesignate the area, but also agrees that the evaluation of the need for the control measures should be expedited. PPACG has proposed that the Air Pollution Control Division expedite analyses of whether oxygenated fuels program is necessary to demonstrate maintenance of the carbon monoxide NAAQS in the Colorado Springs area. This evaluation is consistent with the Division's ongoing consideration of future carbon monoxide control strategies for Colorado's Front Range, and PPACG suggests that an expedited Colorado Springs evaluation could provide valuable information and experience for other areas eligible for redesignation to attainment status. This evaluation shall include both 1990 and 1993 base-years.

The APCD will report its progress to the PPACG and the Air Quality Control Commission in writing in March and June 1998, and will submit the results of said analyses to PPACG and other interested parties.

The PPACG has agreed to review the information, and will make an initial determination regarding whether oxygenated fuels are necessary to maintain the federal carbon monoxide NAAQS within 90 days of receipt of the technical analysis. If the oxygenated fuels program is not necessary to maintain the federal CO standards, PPACG has agreed to petition the Commission for revision of Regulation 13 and the Colorado Springs maintenance plan to reduce the oxygen content requirement or recategorize that program as a "contingency measure," as appropriate in light of the analyses. Similarly, the Division and other interested persons may petition for revisions to the I/M program, or removal of such program from the State Implementation Plan.

Based on this schedule, the Technical Secretary to the Commission has agreed to amend the Commission's long-term schedule and tentatively to set a hearing date as requested by the PPACG as early as practical.

Several parties also objected to the process used by Pikes Peak Area Council of Governments (PPACG) to develop the maintenance plan. The procedure used by the PPACG to develop the maintenance plan complied with the minimum requirements of the Intergovernmental Coordination and Public Involvement process ("the ICPI") contained in the 1982 Colorado Springs Element of the Carbon Monoxide State Implementation Plan (Including the 1993 and 1994 revisions) ("the Colorado Springs attainment SIP").

The primary complaint lodged by the parties is that the PPACG did not adequately consult with the Air Quality Technical Committee (AQTC). However, it appears that the staff of the PPACG consulted with the AQTC, and did so most recently on October 22, 1997 and November 18, 1997. In addition, members of the AQTC presented their complaints to the PPACG in September 1997. Pursuant to the Colorado Springs Attainment SIP, the PPACG is the lead agency for air quality planning and the AQTC is merely an advisory committee. The PPACG is not required to heed the advice of the AQTC. The consultation with AQTC complied with the minimum requirements of the ICPI.

The parties also complain that the maintenance plan had to be approved by the Urban Area Planning Council (UAPC), rather than the PPACG's Board of Directors. However, nothing in the Colorado Springs Attainment SIP implies that the PPACG Board of Directors does not have the authority to develop the maintenance plan. The Colorado Springs Attainment SIP identifies the PPACG as the lead air quality-planning agency, and identifies the UAPC as the Metropolitan Planning Agency for transportation matters, unless objected to by the PPACG. Colorado Springs Attainment SIP, Appendix A. The UAPC is advisory to the PPACG on all other matters, including air quality planning. Id.

Furthermore, according to Ken Prather of PPACG, the UAPC recommended approval of the maintenance plan and redesignation request. The agreements and schedules set out in this Statement of Basis, Specific Statutory Authority, and Purpose shall not be included in the SIP, and this statement of basis, specific statutory authority and purpose shall not be construed to create enforceable requirements.

VIII.H. Total Suspended Particulate Matter Revocation

Adopted: September 17, 1998

The Commission revoked the Colorado ambient air quality standard for Total Suspended Particulate matter to conform Colorado's standards to the current National Ambient Air Quality Standards for Particulate Matter adopted by the U.S. Environmental Protection Agency.

Federal Requirements

The State ambient standard for TSP is based on the National Ambient Air Quality Standard (NAAQS) for TSP that the Environmental Protection Agency ("EPA") repealed in 1987 in favor of the NAAQS for particulate matter less than ten microns in diameter (PM₁₀). The NAAQS for PM₁₀ is less stringent than the State ambient standard for TSP. The repeal of the TSP standard will ensure that Colorado's ambient air quality standards for particulate matter meet, but do not exceed, federal requirements.

The federal government no longer has an ambient air quality standard for particulate matter as TSP. Standards for the PM₁₀ and PM_{2.5} size ranges have been adopted instead. EPA believes that PM₁₀ and PM_{2.5}, the smaller diameter particles, can travel deeper into the lungs than TSP, and has found that the NAAQS for PM₁₀ and PM_{2.5} adequately protect public health. The federal Clean Air Act requires Colorado to adopt the new federal standards, which regulate particulate matter as PM₁₀ and PM_{2.5}. Retention of the state TSP standard would regulate particulate matter in all three-size ranges. The regulation of particulate matter in all three-size ranges is not necessary, and is not cost-effective.

The repeal of the ambient air quality standard for TSP shall be submitted to EPA as a SIP revision.

Statutory Authority

Section 25-7-108, C.R.S., authorizes the Commission to revoke the TSP ambient air quality standard. This section allows the Commission "to adopt, promulgate, amend, and modify such standards for the quality of ambient air as may be appropriate or necessary."

Findings Pursuant to Colorado Revised Statutes 25-7-110.8

This rule change does not include the adoption of any additional control measures intended to reduce air pollution. The Commission's action merely revokes an ambient air quality standard that is not federally required.

VIII.I. Denver metropolitan nonattainment area redesignation as an attainment area for carbon monoxide

Adopted: January 10, 2000

The amendments to the "Ambient Air Quality Standards for the State of Colorado" Regulation adopted by the Commission change the air quality classification of the Denver area for carbon monoxide. The purpose of this rule change is to implement the direction in Section 25-7-107 (2.5), C.R.S. to take expeditious action to redesignate the area as attainment for carbon monoxide (CO).

The amendments also revise the mobile source emissions budget used to determine whether transportation plans and projects conform to the State Implementation Plan.

Federal Requirements

42 USC Section 7407(d)(3) provides that the State may request redesignation to attainment status for areas of the State that qualify for such redesignation based on air quality data, and planning and control considerations. In order for the EPA to approve of such a redesignation request, 42 USC Sections 7407(d)(3)(E) and 7505a require the State to submit a maintenance plan that will provide for maintenance of the standard for ten years following the approval of the redesignation request. The federal requirements for preparation, adoption and submittal of implementation plans, including the maintenance plan, are set out at 40 CFR, Part 51.

The maintenance plan adopted by the Commission includes an oxygenated fuels program and an Automobile Inspection and Readjustment Program as necessary to maintain the National Ambient Air Quality Standards (NAAQS) for carbon monoxide through the year 2013. The year 2013 is approximately ten years following the anticipated date of EPA approval of the maintenance plan.

The federal requirements for emissions budgets are set out at 42 USC Section 7506(c) and 40 CFR 93.124. The emissions budget establishes a test for determining whether transportation plans or projects may cause or contribute to a violation of the NAAQS. The emissions budget contained in the maintenance plan is based on the mobile source emission inventories supporting the maintenance demonstration.

The maintenance plan does not include any provisions that are not required by provisions of the federal act or that are otherwise more stringent than requirements of the federal act.

Statutory Authority

Specific statutory authority for the redesignation of the Denver area as an attainment area is provided in Section 25-7-107, C.R.S. (1999).

Findings pursuant to § 25-7-110.8

The mobile source emissions budget is the only control included in the amendments that will operate to reduce air pollution. The emissions budget establishes a cap on mobile source emissions and is administered through the transportation conformity regulations. Air Quality Control Commission Regulation Number 10, Part B; 40 CFR Part 93. The December 16, 1999 rule amendments reduced the mobile source emissions budget from 825 tons per day to 800 tons per day.

The revisions are based on the computer model currently approved by the EPA. The computer model used to develop the revised rule overstates the air quality benefits of some of the control programs in the SIP. The EPA is currently updating and improving the computer model but the revised computer model has not been approved by EPA and may not be used for federal regulatory purposes. In spite of the problems with the computer model used to develop this regulation, the regulation is based on the most reasonably available, validated, reviewed and sound scientific methodologies currently available under federal law. All methodologies and information made available by interested parties have been considered.

The alternative to the redesignation of the Denver area to an attainment area is to for the Denver area to remain a nonattainment area for carbon monoxide. Redesignation to attainment is the more cost-effective alternative. Redesignation provides the regulated community with more flexibility and achieves the reductions in air pollution necessary to maintain the NAAQS. There is no viable alternative to limiting mobile source emissions to 800 tons per day in the year 2013.

Mobile source emissions can be effectively controlled using the measures described in the maintenance plan to keep mobile source emissions below the emissions budget. Thus, the revision to the ambient air quality standard will maximize the air quality benefits of the Commission's regulations in the most cost-effective manner.

VIII.J. Colorado Springs

Adopted: February 17, 2000

The amendments to the "Ambient Air Quality Standards for the State of Colorado" Regulation adopted by the Commission revise the mobile source emissions budgets for the Colorado Springs area. The emissions budget is to determine whether transportation plans and projects conform to the State Implementation Plan.

Federal Requirements

The federal requirements for emissions budgets are set out at 42 USC 7506(c) and 40 CFR 93.124. The emissions budget establishes a test for determining whether transportation plans or projects may cause or contribute to a violation of the national ambient air quality standard (NAAQS). The emissions budget for Colorado Springs is based on the mobile source inventory for the year 1990. The previous emissions budget, which was adopted in January 1998, was based on the mobile source inventory for the year 1993. Some parties to the January 1998 hearing urged the Commission to adopt an emissions budget based on 1990, rather than 1993, mobile source emissions. The Commission did not have sufficient data or evidence at the January 1998 hearing to establish an emissions budget based on the 1990 base year. Therefore, the Commission adopted an emissions budget based on the 1993 base year and directed the Division to evaluate the request to establish an emissions budget based on 1990 mobile source emissions. Colorado Springs was in attainment of the national standard in both 1990 and 1993 but mobile source emissions were significantly higher in 1990 than in 1993. As authorized by federal regulations, this revision establishes a higher emissions budget for mobile sources based on the 1990 mobile source inventory. The regulatory revisions do not include any provisions that are not required by provisions of the federal act or that are otherwise more stringent than requirements of the federal act.

Statutory Authority

The authority to establish emissions budgets is included in the general authority to adopt a State Implementation Plan set out in Section 25-7-105(1), C.R.S. (1999).

Findings pursuant to Section 25-7-110.8

The emissions budget establishes a cap on mobile source emissions and will be administered through the transportation conformity regulations. Air Quality Control Commission, Regulation Number 10, Part B; 40 CFR Part 93. The change increases the emissions budget, and thus increases the allowable emissions from mobile sources.

The carbon monoxide emissions budget is based on the computer model currently approved by the EPA. The computer model used to develop the revised rule overstates the air quality benefits of some of the control programs in the SIP. The EPA is currently updating and improving the computer model but the revised computer model has not been approved by EPA and may not be used for federal regulatory purposes. In spite of the problems with the computer model used to develop this regulation, the regulation is based on the most reasonably available, validated, reviewed and sound scientific methodologies currently available under federal law. All methodologies and information made available by interested parties have been considered. The revisions to the ambient air quality standard will maximize the air quality benefits of the Commission's regulations in the most cost-effective manner.

VIII.K. Denver, Ozone Maintenance Plan

Adopted: January 11, 2001

The amendments to the Ambient Air Quality Standards for the State of Colorado revise the mobile source emissions budgets for ozone precursors in the Denver metropolitan area. The emissions budgets are used to determine whether transportation plans and projects conform to the State Implementation Plan.

Federal Requirements

The federal requirements for emissions budgets are set out at 42 USC 7506(c) and 40 CFR 93.124. The emissions budget establishes a test for determining whether transportation plans or projects may cause or contribute to a violation of the national ambient air quality standard (NAAQS).

The maintenance plan must include emission budgets for ozone precursors, but the federal rules allow the State some discretion in setting the emissions budgets. The State may set an emission budget equal to the projected emissions from motor vehicles in the last year of the maintenance plan. Alternatively, the State may establish a higher emissions budget for mobile sources if the area could tolerate such higher emissions without exceeding the relevant NAAQS. 40 CFR 93.124. The Denver area can tolerate additional mobile source emissions of ozone precursors. The emissions budgets established in this rulemaking make this entire amount of additional emissions available to DRCOG and CDOT for conformity purposes. The rule revision is not more stringent than requirements of the federal act.

Statutory Authority

The authority to establish emissions budgets is included in the general authority to adopt a State Implementation Plan set out in Section 25-7-105(1), C.R.S. (1999).

Findings pursuant to Section 25-7-110.8

The emissions budgets are based on EPA-approved models and assumptions for estimating emissions from mobile sources. The Commission believes the EPA-approved model is inaccurate, but federal rules require the State to use such model to demonstrate the adequacy of the maintenance plan. Thus, the rule revision is based on the only scientific methodology authorized for use by federal law. All methodologies and information made available by interested parties have been considered.

The revisions to the ambient air quality standard will maximize the air quality benefits of the Commission's regulations in the most cost-effective manner.

VIII.L. Pagosa Springs and Telluride PM10

Adopted: March 16, 2001

The amendments to the "Ambient Air Quality Standards" for the State of Colorado Regulation adopted by the Commission change the air quality classifications of the Pagosa Springs area and the Telluride area for particulate matter. The purpose of this rule change is to implement the direction in Section 25-7-107 (2.5), C.R.S. (1999) to take expeditious action to redesignate the areas as attainment for particulate matter less than ten microns in diameter (PM10). The Commission also adopted simultaneous revisions to the "State Implementation Plan Specific Regulations for Nonattainment - Attainment/Maintenance Areas" to repeal obsolete control measures, contingency measures, and reporting requirements.

The amendments to the "Ambient Air Quality Standards" for the State of Colorado also revise the mobile source emissions budgets for the Pagosa Springs and Telluride areas. The emissions budgets are used to determine whether transportation plans and projects conform to the State Implementation Plan.

Federal Requirements

42 USC 7407(d)(3) provides that the State may request redesignation to attainment status for areas of the State that qualify for such redesignation based on air quality data, and planning and control considerations. In order for the EPA to approve such a redesignation request, 42 USC Sections 7407(d)(3)(E) and 7505a require the State to submit a maintenance plan that will provide for maintenance of the standard for ten years following the approval of the redesignation request. The federal requirements for preparation, adoption and submittal of implementation plans, including the maintenance plan, are set out at 40 CFR, Part 51. The maintenance plans adopted by the Commission will maintain the national standard for PM₁₀ in Pagosa Springs and Telluride for the requisite ten-year period.

The federal requirements for emissions budgets are set out at 42 USC 7506(c) and 40 CFR 93.124. The emissions budget establishes a test for determining whether transportation plans or projects may cause or contribute to a violation of the national ambient air quality standard (NAAQS). The emissions budgets for Telluride and Pagosa Springs are based on the roll-forward analyses that support the maintenance demonstrations.

The regulatory revisions do not include any provisions that are not required by provisions of the federal act or that are otherwise more stringent than requirements of the federal act.

Statutory Authority

Specific statutory authority to redesignate areas to attainment is provided in Section 25-7-107, C.R.S. (1999). The authority to establish emissions budgets is included in the general authority to adopt a State Implementation Plan set out in Section 25-7-105(1), C.R.S. (1999).

Findings pursuant to Section 25-7-110.8

The mobile source emissions budgets are the only control measures included in the amendments that will operate to reduce air pollution. The emissions budgets establish caps on mobile source emissions and are administered through the transportation conformity regulations. Air Quality Control Commission Regulation Number 10, Part B; 40 CFR Part 93. For Pagosa Springs, the change increases the emissions budget, and thus increases the allowable emissions from mobile sources. The rule revisions decrease the allowable mobile source emissions of PM₁₀ in Telluride.

The emissions budgets for PM₁₀ for Pagosa Springs and Telluride are also based on EPA-approved models and assumptions for estimating PM₁₀ emissions from mobile sources. The Commission believes the EPA-approved model is inaccurate, but federal rules require the State to use such model to demonstrate the adequacy of the maintenance plan. In spite of the problems with the computer model used to develop the regulation, the regulation is based on the most reasonably available, validated, reviewed and sound scientific methodologies currently available under federal law. All methodologies and information made available by interested parties have been considered.

The alternative to the redesignation of the Pagosa Springs and Telluride areas to attainment is for them to remain PM₁₀ nonattainment areas. Redesignation to attainment is the more cost-effective alternative. Redesignation provides the regulated community with more flexibility and achieves the reductions in air pollution necessary to maintain the NAAQS. The revisions to the ambient air quality standard will maximize the air quality benefits of the Commission's regulations in the most cost-effective manner.

VIII.M. Denver Metropolitan Area, Redesignation to Attainment for PM10

Adopted: April 19, 2001

The amendments to the “Ambient Air Quality Standards for the State of Colorado” Regulation adopted by the Commission change the air quality classification of the Denver metropolitan area for particulate matter. The purpose of this rule change is to implement the direction in Section 25-7-107 (2.5), C.R.S. (1999) to take expeditious action to redesignate the area as attainment for particulate matter less than ten microns in diameter (PM10). In conjunction with this redesignation, the Commission revised Regulation Number 16, “Street Sanding Emissions” to implement the control measures necessary to maintain the national standard for PM10 for at least ten years.

The change in the classification of the Denver area affects the regulatory requirements applicable to stationary sources. For most types of sources, the threshold for determining whether or not a source is a “major stationary source” for PM, NO_x or SO₂ increases from 100 tons-per-year to 250 tons-per-year. Similarly, the requirements for new major stationary sources to use the lowest achievable emissions rate, and to obtain offsets, are relaxed. The rule change adopted by the Commission, however, maintains existing requirements in Regulation Number 3 for minor sources in the Denver area to use reasonably available control technology. The Commission intends, however, to review this requirement when it reviews Regulation Number 3.

The amendments to the “Ambient Air Quality Standards for the State of Colorado” also revise the PM10 mobile source emissions budget for the Denver metropolitan area. The emissions budget is used to determine whether transportation plans and projects conform to the State Implementation Plan.

Federal Requirements

42 USC 7407(d)(3) provides that the State may request redesignation to attainment status for areas of the State that qualify for such redesignation based on air quality data, and planning and control considerations. In order for the EPA to approve such a redesignation request, 42 USC Sections 7407(d)(3)(E) and 7505a require the State to submit a maintenance plan that will provide for maintenance of the standard for ten years following the approval of the redesignation request. The federal requirements for preparation, adoption and submittal of implementation plans, including the maintenance plan, are set out at 40 CFR, Part 51. The maintenance plans adopted by the Commission will maintain the national standard for PM10 for the requisite ten-year period.

The federal requirements for emissions budgets are set out at 42 USC 7506(c) and 40 CFR 93.124. The emissions budget establishes a test for determining whether transportation plans or projects may cause or contribute to a violation of the national ambient air quality standard (NAAQS). The emissions budget is based on the analysis that supports the maintenance demonstration.

The regulatory revisions do not include any provisions that are not required by provisions of the federal act or that are otherwise more stringent than requirements of the federal act.

Statutory Authority

Specific statutory authority to redesignate areas to attainment is provided in Section 25-7-107, C.R.S. (1999). The authority to establish emissions budgets is included in the general authority to adopt a State Implementation Plan set out in Section 25-7-105(1), C.R.S. (1999).

Findings pursuant to Section 25-7-110.8

The mobile source emissions budgets are the only control measures included in the amendments to the Ambient Air Quality Standards rule that will operate to reduce air pollution. The reference to Regulation Number 3 added to the Ambient Air Quality Standards merely maintains the *status quo*; it does not establish any new requirement. The emissions budgets establish caps on mobile source emissions and are administered through the transportation conformity regulations. Air Quality Control Commission Regulation Number 10, Part B; 40 CFR Part 93. By capping mobile source emissions at a prescribed limit, the emission budget could result in a demonstrable reduction in air pollution.

The emissions budgets are based on EPA-approved models and assumptions for estimating PM₁₀ emissions from mobile sources. The Commission believes the EPA-approved models are inaccurate, but federal rules require the State to use such models to demonstrate the adequacy of the maintenance plan. Thus, the emissions budgets are based on the only methodologies authorized for use by federal law. All methodologies and information made available by interested parties have been considered.

The alternative to redesignation is for the Denver area to remain a PM₁₀ nonattainment area. Redesignation to attainment is the more cost-effective alternative. Redesignation provides the regulated community with more flexibility and achieves the reductions in air pollution necessary to maintain the NAAQS. The revisions to the ambient air quality standard will maximize the air quality benefits of the Commission's regulations in the most cost-effective manner.

VIII.N. Lamar and Steamboat Springs, Redesignation to Attainment for PM₁₀

Adopted: November 15, 2001

The amendments to the "Ambient Air Quality Standards for the State of Colorado" Regulation adopted by the Commission change the air quality classifications of the Steamboat Springs and Lamar areas to attainment/maintenance for particulate matter, and revise the mobile source emissions budgets for these areas. The Commission adopted simultaneous revisions to the "State Implementation Plan-Specific Regulation for Nonattainment Areas" to repeal obsolete contingency measures.

Federal Requirements

The relevant federal requirements are described in detail in the statement of basis, specific statutory authority and purpose for Pagosa Springs and Telluride published in Section VIII.L. of the ambient air quality standards regulation. Nothing in this rule change exceeds the minimum requirements of the federal act.

Statutory Authority

Specific statutory authority to redesignate areas to attainment is provided in Section 25-7-107, C.R.S. (1999). The authority to establish emissions budgets is included in the general authority to adopt a State Implementation Plan set out in Section 25-7-105(1), C.R.S. (1999).

Findings pursuant to Section 25-7-110.8

The mobile source emission budget is the only control measures included in the amendments that will operate to reduce air pollution. The emissions budget is based on EPA-approved models and assumptions for estimating PM₁₀ emissions from mobile sources. The Commission believes the EPA-approved model is inaccurate, but federal rules require the State to use such model to demonstrate the adequacy of the maintenance plan. All methodologies and information made available by interested parties have been considered.

The alternative to the redesignation of the areas to attainment is for these areas to remain PM10 nonattainment areas. Redesignation to attainment is the more cost-effective alternative. Redesignation provides the regulated community with more flexibility and achieves the reductions in air pollution necessary to maintain the NAAQS. The revisions to the ambient air quality standard will maximize the air quality benefits of the Commission's regulations in the most cost-effective manner.

VIII.O. Fort Collins

Adopted: July 18, 2002

The amendments to the "Ambient Air Quality Standards for the State of Colorado" Regulation adopted by the Commission change the air quality classification of the Fort Collins area to attainment/maintenance for carbon monoxide and establish a mobile source emissions budget for the area. The Commission adopted simultaneous revisions to Regulation Number 11, Regulation Number 13 and the "State Implementation Plan-Specific Regulation for Nonattainment Areas."

The Commission also repealed Section V.B, "Requirement Regarding Enforceability." Section V.B established criteria for emission reduction credit in transportation conformity determinations. Federal regulations already establish such criteria. 40 CFR 93.122. Although Section V.B. was similar to the federal criteria set out at 40 CFR 93.122, Section V.B did not expressly authorize the option of taking credit for a control measure based on a SIP commitment to implement such a program.

Thus, Section V.B appeared to deny transportation agencies an option that is available under the federal rules. The maintenance plan adopted by the Commission in conjunction with these changes to the Ambient Air Quality Standards regulations includes a commitment to implement an automobile testing program in the year 2026. Under the federal rules, such a commitment will allow the Colorado Department of Transportation to take emission reduction credit for the inspection program when it makes transportation conformity determinations that extend beyond 2026. The Commission repealed Section V.B so that the rules for taking credit during transportation conformity determinations are identical to the federal rules on the subject. Elsewhere, in Regulation Number 10, Part B, the Commission has already passed a state regulation requiring transportation agencies to comply with the federal rules when performing transportation conformity determinations. Therefore, Section V.B was confusing and unnecessary, and may have exceeded the minimum federal requirements. Finally, the Commission made several minor housekeeping changes and repealed obsolete provisions.

Federal Requirements

The federal requirements relevant to the redesignation and the emission budget are described in detail in the statement of basis, specific statutory authority and purpose for Pagosa Springs and Telluride published in Section VIII.L of the ambient air quality standards regulation. The federal regulation establishing criteria for taking credit in transportation conformity determinations is set out at 40 CFR 93.122. Nothing in this rule change exceeds the minimum requirements of the federal act.

Statutory Authority

Specific statutory authority to redesignate areas to attainment is provided in Section 25-7-107, C.R.S. (1999). The authority to establish emissions budgets and to establish criteria for transportation conformity determinations is included in the general authority to adopt a State Implementation Plan set out in Section 25-7-105(1), C.R.S. (1999).

Findings pursuant to Section 25-7-110.8

The mobile source emission budget is the only control measures included in the amendments that will operate to reduce air pollution. The emissions budget is based on EPA's recently released MOBILE6. Federal rules require the State to use a model approved by EPA. The Commission believes that the MOBILE6 model is superior to the MOBILE5 model that was used to develop earlier SIPs. All methodologies and information's made available by interested parties have been considered.

The alternative to the redesignation of the areas to attainment is for the Fort Collins area to remain a nonattainment area for carbon monoxide. Redesignation to attainment is the more cost-effective alternative. Redesignation provides the regulated community with more flexibility and maintains the reductions in air pollution necessary to maintain the NAAQS. In particular, it allowed the Commission to repeal the oxygenated fuels program for the Fort Collins area, and to remove the automobile testing program from the SIP. The removal of the automobile testing program from the SIP gives the State the flexibility to amend or repeal the program later without the delay of the SIP amendment and approval process. For these reasons, the revisions to the ambient air quality standard will maximize the air quality benefits of the Commission's regulations in the most cost- effective manner.

VIII.P. Greeley

Adopted: December 19, 2002

The amendments to the "Ambient Air Quality Standards for the State of Colorado" Regulation adopted by the Commission establish mobile source emissions budgets for the Greeley area. The Commission adopted simultaneous revisions to Regulation Number 13 so that this rule no longer applies in the Greeley area.

Federal Requirements

Nothing in this rule change exceeds the minimum requirements of the federal act.

Statutory Authority

The authority to establish emissions budgets and to establish criteria for transportation conformity determinations is included in the general authority to adopt a State Implementation Plan set out in Section 25-7-105(1), C.R.S. (2001).

Findings pursuant to Section 25-7-110.8

The mobile source emissions budgets are based on EPA's MOBILE6 emissions model, as required by federal regulations. All methodologies and information made available by interested parties have been considered. The emissions budgets reduce the potential for air pollution by capping emissions from mobile sources. The rule allocates the margin of safety to mobile sources, thus providing the transportation community with maximum flexibility authorized by federal law. in adopting this rule, the Commission chose the most cost-effective alternative.

VIII.Q. Denver Carbon Monoxide

Adopted: June 19, 2003

The carbon monoxide emissions budget for the Denver area has been revised to reflect a new computer model (mobile6) issued by EPA for use in estimating emissions from motor vehicles. Federal law requires transportation agencies to use such budgets to make transportation conformity determinations on transportation plans and programs. 40 CFR 93.118. Transportation agencies must use mobile6 for transportation conformity determinations that begin after January 2004.

Federal Requirements

The revision to the emission budget follows EPA policy established in *Policy Guidance On The Use of Mobile6 For Sip Development and Transportation Conformity* (U.S. EPA, Jan. 18,2002). The Commission's regulation does not allocate the entire safety margin to mobile sources, as authorized by federal regulations. Instead, the Commission reserved a portion of the safety margin in order to preserve a cushion for growth in other source categories. The reservation of a portion of the safety margin does not mean that the rule exceeds minimum federal requirements. Instead, the rule merely preserves a margin of safety for growth in other sources.

Statutory Authority

The Commission adopts this change under its general authority to promulgate and adopt a state implementation plan, as set out in Section 25-7-105(1)(a), C.R.S.

Findings pursuant to Section 25-7-110.8. C.R.S.

The purpose of this rule change is to make sure that transportation agencies will use mobile6-based emissions budgets when making mobile6-based transportation conformity determinations. The rule change is not intended to reduce air pollution. The requirements of 25-7-110.8 do not apply.

VIII.R. Longmont and Colorado Springs Carbon Monoxide

Adopted: December 18,2003

The carbon monoxide emission budgets for the Longmont and Colorado Springs areas have been revised to reflect a new computer model (mobile6) issued by EPA for use in estimating emissions from motor vehicles. Federal law requires transportation agencies to use such budgets to make transportation conformity determinations on transportation plans and programs. 40 CFR 93.118. Transportation agencies must use mobile6 for transportation conformity determinations that begin after January 2004.

Federal Requirements

The revisions to the emission budgets follow EPA policy established in *policy guidance on the use of mobile6 for sip development and transportation conformity* (u.s. EPA, Jan. 18,2002). The Commission's regulation allocates the entire safety margin to mobile sources, as authorized by federal regulations.

Statutory Authority

The Commission adopts this change under its general authority to promulgate and adopt a state implementation plan, as set out in Section 25-7-105(1)(a), C.R.S.

Findings pursuant to Section 25-7-110.8. C.R.S.

The purpose of this rule change is to make sure that transportation agencies will use mobile6-based emissions budgets when making mobile6-based transportation conformity determinations. The rule change is not intended to reduce air pollution. The requirements of 25-7-110.8 do not apply.

VIII.S. Denver 8-Hour Ozone

Adopted: March 11, 2004

The purpose of this rule change is to define the geographic scope of the Denver 8-hour Ozone Nonattainment Area for purposes of State Law and Commission regulations. This definition is not to be included in the state implementation plan.

The Commission adopted this definition in conjunction with the Ozone Action Plan and certain revisions to of Regulation Number 7 to reduce emissions of volatile organic compounds from oil and gas operations and from stationary and portable reciprocal internal combustion engines. Such control measures in Sections XVI, XVI, and XVII VI of Regulation Number 7 apply in the Denver 8-hour Ozone Nonattainment Area, as defined in the Ambient Air Quality Standards Regulation.

The U.S. EPA will also define the geographic scope of the Denver 8-hour Ozone Nonattainment Area. The Commission intends for its State definition of such area to be identical to the federal definition. The Commission would ordinarily incorporate the federal definition by reference but the Commission cannot do that in this case because EPA has not yet adopted a final rule defining the Denver 8-hour Ozone Nonattainment Area and will not do so until April 15, 2004 at the earliest. Section 24-4-103(12.5), C.R.S. prohibits the Commission from adopting a later edition of the federal rule. In the event the area defined by the federal rule is smaller than the area defined by this rule, the Commission will promptly revise this rule to conform to the federal rule.

The statutory authority to define the nonattainment area is set out in Sections 25-7-105(1)(a) and (1)(b); 25-7-106(1)(b)(viii), (1)(c) and (5); and 25-7-109(1)(a) and (2), C.R.S.

VIII.T. Denver 8-Hour Ozone

Adopted: December 16, 2004

The purpose of this rule change is to revise the geographic scope of the Denver 8-hour Ozone Nonattainment Area for purposes of State law and Commission regulations.

The revision to the boundaries for the Denver 8-hour ozone control area match the boundaries promulgated by the Environmental Protection Agency on April 15, 2004. The initial boundaries matched EPA's proposed boundaries for the area.

The revisions also include minor, nonsubstantive changes to simplify the language.

The statutory authority to define the nonattainment area is set out in Sections 25-7-105(1)(a) and (1)(b); 25-7-106(1)(b)(VIII), (1)(c) and (5); and 25-7-109(1)(a) and (2), C.R.S.

VIII.U. Denver and Longmont Carbon Monoxide Carbon Monoxide, and Denver PM10

Adopted: December 15, 2005

The Commission revised the emissions budgets for carbon monoxide and PM10 for Denver, as well as the carbon monoxide emissions budget for Longmont. The changes update the emissions budgets using the latest EPA computer models.

The Commission has assigned the safety margin for both carbon monoxide and particulate matter to the mobile source emissions budget, reserving a portion of the carbon monoxide safety margin in case of additional growth in other sectors beyond the growth anticipated in the maintenance demonstration. The rule also provides some flexibility to trade between the NOx and primary particulate budgets for purposes of transportation conformity determinations. The federal rules allow, but do not require, assignment of some or the entire safety margin to the transportation conformity budget. The reservation of a portion of the carbon monoxide safety margin allows for additional growth in other sectors, but does not make the rule more stringent than the federal requirements.

The authority to establish emissions budgets is included in the general authority to adopt a state implementation plan set out in Section 25-7-105(1), C.R.S.

The mobile source emissions budgets are based on EPA-approved computer models, as required by federal regulations. All methodologies and information made available by interested parties have been considered. The rule allocates most of the margin of safety to mobile sources, but maintains a reasonable margin for accommodation of uncertainty and future growth in other sectors. The allocation of most of the safety margin to mobile sources provides flexibility for the transportation community. In adopting this rule, the Commission chose the most cost-effective option.

VIII.V. Cañon City PM10

Adopted: November 20, 2008

The amendments to the "Ambient Air Quality Standards for the State of Colorado" Regulation adopted by the Commission establish mobile source emissions budgets for the Cañon City area.

Federal Requirements

Nothing in this rule change exceeds the minimum requirements of the federal act.

Statutory Authority

The authority to establish emissions budgets and to establish criteria for transportation conformity determinations is included in the general authority to adopt a State Implementation Plan set out in Section 25-7-105(1), C.R.S. (2001).

Findings pursuant to Section 25-7-110.8

The mobile source emissions budgets are based on EPA's MOBILE6 emissions model and EPA-approved methods for calculating fugitive dust emissions as required by federal regulations. All methodologies and information made available by interested parties have been considered. The emissions budgets reduce the potential for air pollution by capping emissions from mobile sources. In adopting this rule, the Commission chose the most cost-effective alternative.

Further, these revisions include any typographical, grammatical and formatting errors throughout the regulation.

VIII.W. Denver Metro Area/North Front Range 8-Hour Ozone Emissions Budgets

Adopted: December 11, 2008

The amendments to the “Ambient Air Quality Standards for the State of Colorado” Regulation adopted by the Commission establish mobile source emissions budgets for the Denver Metro Area/North Front Range 8-Hour Ozone area.

Federal Requirements

Nothing in this rule change exceeds the minimum requirements of the federal act.

Statutory Authority

The authority to establish emissions budgets and to establish criteria for transportation conformity determinations is included in the general authority to adopt a State Implementation Plan set out in Section 25-7-105(1) and in 25-7-107(1), C.R.S.

Findings pursuant to Section 25-7-110.8

The mobile source emissions budgets are based on EPA's MOBILE6 emissions model and EPA-approved methods for calculating fugitive dust emissions as required by federal regulations. All methodologies and information made available by interested parties have been considered. The emissions budgets reduce the potential for air pollution by capping emissions from mobile sources. In adopting this rule, the Commission chose the most cost-effective alternative.

VIII.X. Pagosa Springs PM10

Adopted: November 19, 2009

The amendments to the “Ambient Air Quality Standards for the State of Colorado” Regulation adopted by the Commission establish mobile source emissions budgets for the Pagosa Springs PM10 attainment area.

Federal Requirements

Nothing in this rule change exceeds the minimum requirements of the federal act.

Statutory Authority

The authority to establish emissions budgets and to establish criteria for transportation conformity determinations is included in the general authority to adopt a State Implementation Plan set out in Section 25-7-105(1), C.R.S. (2001).

Findings pursuant to Section 25-7-110.8

The mobile source emissions budgets are based on EPA's MOBILE6 emissions model and EPA-approved methods for calculating fugitive dust emissions as required by federal regulations. All methodologies and information made available by interested parties have been considered. The

emissions budgets reduce the potential for air pollution by capping emissions from mobile sources. In adopting this rule, the Commission chose the most cost-effective alternative. Further, these revisions will include any typographical, grammatical and formatting errors throughout the regulation.

VIII.Y. Telluride PM10

Adopted: November 19, 2009

The amendments to the “Ambient Air Quality Standards for the State of Colorado” Regulation adopted by the Commission establish mobile source emissions budgets for the Telluride PM10 attainment area.

Federal Requirements

Nothing in this rule change exceeds the minimum requirements of the federal act.

Statutory Authority

The authority to establish emissions budgets and to establish criteria for transportation conformity determinations is included in the general authority to adopt a State Implementation Plan set out in Section 25-7-105(1), C.R.S. (2001).

Findings pursuant to Section 25-7-110.8

The mobile source emissions budgets are based on EPA's MOBILE6 emissions model and EPA-approved methods for calculating fugitive dust emissions as required by federal regulations. All methodologies and information made available by interested parties have been considered. The emissions budgets reduce the potential for air pollution by capping emissions from mobile sources. In adopting this rule, the Commission chose the most cost-effective alternative.

Further, these revisions will include any typographical, grammatical and formatting errors throughout the regulation.

VIII.Z. Ambient Air Quality Standards Regulation Update

Adopted: March 18, 2010

The Commission intends to maintain and update its Ambient Air Quality Standards Regulation.

Statutory Authority

This Statement of Basis, Specific Statutory Authority and Purpose complies with the requirements of the Colorado Administrative Procedures Act, C.R.S. § 24-4-103, and the Colorado Air Pollution Prevention and Control Act, C.R.S. §§ 25-7-110, 110.5, and 110.8. Specifically, C.R.S. § 25-7-108 authorizes the Commission to adopt standards for the quality of ambient air. C.R.S. §§ 25-7-201 and 25-7-209 provide that increases in pollution concentrations above baseline concentration shall be the same as those provided for in the federal Clean Air Act.

Basis

Colorado's Ambient Air Quality Standards Regulation is outdated and unclear.

Purpose

The Commission intends to revise the Ambient Air Quality Standards Regulation by: 1) removing the ambient air quality standards in the Ambient Air Table in Section II.; 2) removing the state-only PSD SO₂ increments in Section I.B.; and 3) making administrative changes, including typographical, grammatical and formatting corrections, as necessary.

Remove Section II. (Ambient Air Table)

The Commission removes the Ambient Air Table in Section II., as it is unnecessary. The National Ambient Air Quality Standards (NAAQS) are set by EPA. Citizens can get more current data from EPA. The EPA maintains a readily available and accessible summary table of these NAAQS on the internet (see <http://epa.gov/air/criteria.html>), and the details of the NAAQS are codified in 40 C.F.R. Part 50, which is also readily available and accessible on the internet. For these reasons, the Commission removes this Section II., and references where the information can be found.

Remove Section I.B. (State-only PSD SO₂ Increments)

The Commission removes the state-only incremental ambient air standards for SO₂, as they are artifacts from 1970's rulemakings that cannot be fully applied per current rules. The following table compares Colorado's SO₂ increments to the federal SO₂ increments.

	Colorado SO ₂ Increments ¹			Federal SO ₂ Increments ²		
	Category I	Category II	Category III	Class I	Class II	Class III
Arithmetic Mean	2 ug/m ³	10 ug/m ³	15 ug/m ³	2 ug/m ³	20 ug/m ³	40 ug/m ³
24-Hour Maximum	5 ug/m ³	50 ug/m ³	100 ug/m ³	5 ug/m ³	91 ug/m ³	182 ug/m ³
3-Hour Maximum	25 ug/m ³	300 ug/m ³	700 ug/m ³	25 ug/m ³	512 ug/m ³	700 ug/m ³

Note the distinction between Colorado's SO₂ increment Category areas and the federal Class areas. When applicable, Colorado's Category I areas for SO₂ were essentially the same as EPA's Class I area, except that Colorado's Category I areas included some additional national monuments and forest service primitive areas that would otherwise be considered as Class II areas. While these former Category I areas for SO₂ were classified as Class II, they were given the protection of the Class I PSD increment for SO₂ only. The remainder of the state was then considered Category II, and now considered a Class II area. There are no Category III or Class III areas previously or currently designated in Colorado.

These state-only SO₂ increments no longer apply to any area in the state. Early versions of the Ambient Air Quality Standards Regulation identify Category I, II and III areas in the state, in which these Colorado SO₂ increments applied³.

¹ See Ambient Air Quality Standards Regulation, Section I.B.

² See the Clean Air Act, Section 163(b), and/or Colorado's State Implementation Plan - Regulation 3, Part D, Section X.A.

However, in 1981, in preparation to adopt the federal Prevention of Significant Deterioration (PSD) rules, a Colorado Increment Task Force met and ultimately made recommendations on how to adopt the federal PSD Program in Colorado. Colorado's SO₂ increments were part of these recommendations. The Colorado Increment Task Force recommended the Commission review its authority to adopt more stringent increments than EPA⁴. Later in 1983, when the Commission adopted the federal PSD Program, industry identified similar concerns over authority to adopt more stringent increments than EPA⁵.

Review of the supporting rulemaking documents indicates that the Commission intentionally abandoned the use of Category I, II and III areas, largely adhering to the federal PSD Program's Class I, II and III areas instead. In 1983, when the Commission did adopt the federal PSD program, those classifications were more appropriately moved to Regulation Number 3. Today, area classifications are found in Regulation Number 3, Part D, Section VIII. This section only mentions Class I and II areas, and not any Category I, II or III. The current classifications are the same as those adopted in 1983. Based on the authority issues raised by Colorado Increment Task Force and industry, the omission of "categories" in the adopted Regulation Number 3 appears to be intentional.

In the absence of clearly defined geographic "Category" areas in rule, the Colorado "Category I, II and III" incremental standards that remain in the Ambient Air Quality Standards Regulation cannot be applied in practice. While this proposal removes the state-only SO₂ incremental standards, this change does not undermine existing protection for Colorado Federal Class I and II areas, or for those additional Colorado national monuments and forest service primitive areas currently granted Class I protection in Regulation Number 3.

For these reasons, these state-only SO₂ PSD increments should be removed from regulation.

Reorganize, Clarify and Make Typographical, Grammatical, and Formatting Corrections

The remaining proposed revisions to reorganize and rename the regulation, identify existing standards as state-only, identify missing CO and PM₁₀ attainment/maintenance effective dates in tables, revise the 1-Hour Ozone Attainment/Maintenance Map title to clarify association with the 1-hour standard only, and make typographical, grammatical and formatting corrections, as necessary, are purely administrative in nature, and not believed to have any economic impact.

Findings pursuant to C.R.S. §§ 110.5(5)(a) and 110.8

These revisions eliminate PSD SO₂ increments that would be more stringent than federal increments if they had been fully implemented. Because there are no currently designated areas to which the more stringent standards would apply, these standards cannot be implemented. Therefore, these revisions do not exceed or differ from the federal act or rules.

These revisions align the increments in question with federal increments. The federal increments are based on reasonably available, validated, reviewed and sound scientific methodologies. These revisions are not intended to reduce air pollution and do not result in a demonstrable reduction in air pollution. Public health and the environment are sufficiently protected by the national increments. These revisions benefit the government, regulated community and the public by eliminating confusion caused by differences between state and federal requirements.

³ See Ambient Air Quality Standards Regulation versions adopted September 4, 1975 and October 27, 1977.

⁴ See the December 17, 1981 "Increment Task Force Recommendations and Background Material," prepared for the AQCC, p. 4.

⁵ See Exhibit M to the 1983 Rulemaking Hearing adopting the PSD program into Regulation 3, "Summary of Party Comments and Division Evaluation", p. 101

VIII.AA. Aspen PM10

Adopted: December 16, 2010

The amendments to the “Ambient Air Quality Standards for the State of Colorado” Regulation adopted by the Commission establish mobile source emissions budgets for the Aspen area.

Federal Requirements

Nothing in this rule change exceeds the minimum requirements of the federal act.

Statutory Authority

The authority to establish emissions budgets and to establish criteria for transportation conformity determinations is included in the general authority to adopt a State Implementation Plan set out in Section 25-7-105(1), C.R.S. (2001).

Findings pursuant to Section 25-7-110.8

The mobile source emissions budgets are based on EPA's MOVES2010 emissions model and EPA-approved methods for calculating fugitive dust emissions as required by federal regulations. All methodologies and information made available by interested parties have been considered. The emissions budgets reduce the potential for air pollution by capping emissions from mobile sources. In adopting this rule, the Commission chose the most cost-effective alternative.

VIII.BB. Steamboat Springs

Adopted: December 15, 2011

Basis and Purpose

The purpose of this amendment is to update the PM10 emission budget for the Steamboat Springs area in connection with the adoption of the Revised PM10 Maintenance Plan for the Steamboat Springs Attainment/Maintenance Area.

Specific Statutory Authority

The Commission promulgates this regulatory change pursuant to its authority under Section 25-7-105(1)(a)(I), C.R.S. to adopt a comprehensive state implementation plan that meets the requirements of the federal Clean Air Act.

Findings Pursuant to Section 25-7-110.8

The mobile source emission budgets are based on EPA-approved methods for calculating PM10 emissions as required by federal regulations. All methodologies and information made available by interested parties have been considered. The emission budgets reduce the potential for air pollution by capping emissions from mobile sources. In adopting this rule, the Commission chose the most cost-effective alternative.

VIII.CC. Lamar PM10

Adopted: December 20, 2012

The amendments to the “Air Quality Standards for the State of Colorado” Regulation adopted by the Commission establish mobile source emissions budgets for the Lamar area.

Federal Requirements

Nothing in this rule change exceeds the minimum requirements of the federal act.

Statutory Authority

The authority to establish emissions budgets and to establish criteria for transportation conformity determinations is included in the general authority to adopt a State Implementation Plan set out in Section 25-7-105(1), C.R.S. (2001).

Findings pursuant to Section 25-7-110.8

The mobile source emissions budgets are based on EPA's MOVES2010a emissions model and EPA-approved methods for calculating fugitive dust emissions as required by federal regulations. All methodologies and information made available by interested parties have been considered. The emissions budgets reduce the potential for air pollution by capping emissions from mobile sources. In adopting this rule, the Commission chose the most cost-effective alternative.

VIII.DD. Revision to Emission Budgets for Nonattainment Areas in the State of Colorado

Adopted: November 17, 2016

This Statement of Basis, Specific Statutory Authority and Purpose complies with the requirements of the Colorado Administrative Procedure Act Sections 24-4-103, C.R.S. and the Colorado Air Pollution Prevention and Control Act Sections 25-7-110 and 25-7-110.5, C.R.S. (“the Act”).

Basis

The Commission revised the emission budgets contained in the Air Quality Standards, Designations and Emission Budgets Regulation to reflect emission budgets used in the 2008 Ozone SIP for the “Moderate” classification, consistent with federal requirements.

Statutory Authority

The authority to establish emissions budgets and to establish criteria for transportation conformity determinations is included in the general authority to adopt a State Implementation Plan (“SIP”) set out in Section 25-7-105(1), C.R.S.

Purpose

Ozone Reclassification

In 2008, the U.S. Environmental Protection Agency (“EPA”) revised the 8-Hour Ozone NAAQS. The Clean Air Act requires areas designated nonattainment a NAAQS to adopt or revise their Ozone SIP to make reasonable further progress towards attainment and attain the NAAQS. The Denver Metro/North

Front Range nonattainment area ("DM/NFR") was classified as a Marginal Nonattainment Area for the 2008 8-Hour Ozone NAAQS in 2012, with an attainment date of July 20, 2015.

The DM/NFR did not attain the 2008 8-Hour- Ozone NAAQS in 2015; therefore, effective June 3, 2016, EPA reclassified the DM/NFR as a Moderate Nonattainment Area with an attainment date of July 20, 2018. See 81 Fed. Reg. 26714 (May 4, 2016). A Moderate Nonattainment Area classification requires that the associated SIP include an attainment demonstration, reasonably available control technology (“RACT”) and reasonably available control measures (“RACM”) requirements, reasonable further progress reductions in volatile organic compound (“VOC”) and/or nitrogen oxides (“NOx”) emissions in the area, contingency measures should the area fail to meet a milestone or to attain the standard, a vehicle inspection and maintenance program, and NOx and VOC emission offsets ratios for major source permits. As discussed more fully below, the proposed revisions to Section V. of the Air Quality Standards Regulation are necessary to meet reasonable further progress milestones and demonstrate attainment of the 2008 8-Hour Ozone NAAQS.

Motor Vehicle Emission Budgets

Section V. of the Air Quality Standards Regulation contains motor vehicle emission budgets for attainment/maintenance areas in Colorado. Motor vehicle emission budgets are utilized to assess conformity with Colorado’s Ozone SIP. Section 176(c) of the Clean Air Act requires that transportation plans, transportation improvement programs (“TIPs”), and projects adopted by a metropolitan planning organization⁶ are consistent with (“conform to”) the appropriate SIP. Conformity with the appropriate SIP means that the transportation activities will not cause new violations of the NAAQS, worsen existing violations, or delay timely attainment of the NAAQS. Pursuant to EPA regulations implementing Section 176(c) (40 CFR Parts 51 and 93), mobile source emissions resulting from such plans and programs ultimately must be demonstrated to be consistent with the motor vehicle emission budgets set forth in the applicable SIP. See 40 CFR Part 93. Motor vehicle emission budgets are required by federal regulations which afford the State flexibility in determining what the budgets should be. See 40 CFR 51.390.

The Commission revised the motor vehicle emission budgets to reflect budgets used in the 2008 Ozone SIP for the “Moderate” classification. These emission budgets will supersede the emission budgets associated with the 1997 8-Hour Ozone NAAQS upon the effective date of EPA’s determination of adequacy for transportation conformity purposes.

Specifically, the DM/NFR Nonattainment Area emissions budgets were revised as follows: the regional emissions budget for NOx was changed from 122.9 to 73 tons per day; the regional emissions budget for VOCs was changed from 109.2 to 55 tons per day; the southern sub-regional emissions budget for NOx was changed from 102.4 to 61 tons per day; the southern sub-regional emissions budget for VOCs was changed from 89.7 to 47 tons per day; the northern sub-regional emissions budget for NOx was changed from 20.5 to 12 tons per day, and; the northern sub-regional emissions budget for VOCs was changed from 19.5 to 8 tons per day.

Finding pursuant to C.R.S. § 25-7-110.5(5)

The emission budgets established in this rule support the attainment demonstration for the 2008 8-Hour Ozone NAAQS and therefore comply with, and do not exceed, federal requirements.

Findings pursuant to C.R.S. § 25-7-110.8

The motor vehicle emission budgets are based on EPA-approved methods for calculating VOC and NOx emissions as required by federal regulations. They reduce the potential for air pollution by capping emissions from mobile sources. All methodologies and information made available by interested parties have been considered. In proposing these revisions, the Division chose the most-cost-effective

⁶ In the DM/NFR Nonattainment Area, the metropolitan planning organization responsible for such projects is the Denver Regional Council of Governments or “DRCOG” and the North Front Range Metropolitan Planning Organization or “NFRMPO.”

alternative. Further, the Commission corrected any typographical, grammatical and formatting errors found within the regulation.

VIII.EE. Revision to Emission Budgets for Nonattainment Areas in the State of Colorado

Adopted: December 18, 2020

This Statement of Basis, Specific Statutory Authority and Purpose complies with the requirements of the State Administrative Procedure Act § 24-4-101, C.R.S. et seq., the Colorado Air Pollution Prevention and Control Act § 25-7-101, C.R.S. et seq. (the Act), and the Air Quality Control Commission (Commission) Procedural Rules, 5 CCR 1001-1., CRS.

Basis

The Commission revised the emission budgets contained in the Air Quality Standards, Designations and Emission Budgets Regulation to reflect emission budgets used in the 2008 Ozone SIP for the “Serious” classification, consistent with federal requirements.

Statutory Authority

The authority to establish emissions budgets and to establish criteria for transportation conformity determinations is included in the general authority to adopt a State Implementation Plan (SIP) set out in Section 25-7-105(1), C.R.S.

Purpose

On March 12, 2008, the Environmental Protection Agency (EPA) revised the national ambient air quality standard (NAAQS) for ozone to 0.075 ppm (2008 NAAQS). Colorado’s Denver Metro North Front Range (DMNFR) was classified as Marginal, effective July 20, 2012, with an attainment date of December 31, 2015. On May 4, 2016, EPA reclassified the DMNFR to Moderate, setting an attainment deadline of July 20, 2018. Effective January 27, 2020, EPA classifies the DMNFR to Serious, setting an attainment deadline of July 20, 2021 (84 Fed. Reg. 247 (December 26, 2019)).

The Air Quality Standards Regulation, Section V. contains motor vehicle emission budgets for attainment/maintenance areas in Colorado. Motor vehicle emission budgets are utilized to assess conformity with Colorado’s Ozone SIP. Section 176(c) of the Clean Air Act requires that transportation plans, transportation improvement programs (TIPs), and projects adopted by a metropolitan planning organization⁷ are consistent with (i.e., conform to) the appropriate SIP.

Conformity with the appropriate SIP means that the transportation activities will not cause new violations of the NAAQS, worsen existing violations, or delay timely attainment of the NAAQS. Pursuant to EPA regulations implementing Section 176(c) (40 CFR Parts 51 and 93), mobile source emissions resulting from such plans and programs ultimately must be demonstrated to be consistent with the motor vehicle emission budgets set forth in the applicable SIP. See 40 CFR Part 93. Motor vehicle emission budgets are required by federal regulations which afford the State flexibility in determining what the budgets should be. See 40 CFR 51.390.

The Commission revised the motor vehicle emission budgets to reflect budgets used in the Serious SIP on a “state only” basis in the Air Quality Standards Regulation. Under EPA’s regulations, motor vehicle

⁷ In the DM/NFR Nonattainment Area, the metropolitan planning organization responsible for such projects is the Denver Regional Council of Governments or “DRCOG” and the North Front Range Metropolitan Planning Organization or “NFRMPO.”

emission budgets are determined by the applicable control strategy SIP and not by Colorado's Air Quality Standards Regulation. Therefore, this "state only" designation removes a redundancy for the purposes of EPA review and approval. This revision does not change the calculated motor vehicle emission budgets or the enforceability of the motor vehicle emission budgets.

These emission budgets will supersede the emission budgets associated with the 1997 8-Hour Ozone NAAQS upon the effective date of EPA's determination of adequacy for transportation conformity purposes.

Specifically, the DMNFR emissions budgets were revised as follows: the regional emissions budget for NO_x was changed from 73 to 54.7 tons per day; the regional emissions budget for VOCs was changed from 55 to 49.4 tons per day; the southern sub-regional emissions budget for NO_x was changed from 61 to 45 tons per day; the southern sub-regional emissions budget for VOCs was changed from 47 to 41.2 tons per day; the northern sub-regional emissions budget for NO_x was changed from 12 to 9.7 tons per day, and; the northern sub-regional emissions budget for VOCs was changed from 8 to 8.2 tons per day.

Further, the Commission corrected any typographical, grammatical and formatting errors found within the regulation.

Federal Requirements

The emission budgets established in this rule support the attainment demonstration for the 2008 8-Hour Ozone NAAQS and therefore comply with, and do not exceed, federal requirements.

Findings pursuant to Section 25-7-110.8

The motor vehicle emission budgets are based on EPA-approved methods for calculating VOC and NO_x emissions as required by federal regulations. They reduce the potential for air pollution by capping emissions from mobile sources. All methodologies and information made available by interested parties have been considered. In proposing these revisions, the Division chose the most-cost-effective alternative.

VIII.FF. Revision to Emission Budgets for Nonattainment Areas in the State of Colorado

Adopted: December 15, 2022

This Statement of Basis, Specific Statutory Authority and Purpose complies with the requirements of the State Administrative Procedure Act § 24-4-101, C.R.S. et seq., the Colorado Air Pollution Prevention and Control Act § 25-7-101, C.R.S. et seq. (the Act), and the Air Quality Control Commission (Commission) Procedural Rules, 5 CCR 1001-1., CRS.

Basis

The Commission revised the emission budgets contained in the Air Quality Standards, Designations and Emission Budgets Regulation to reflect emission budgets used in the 2008 Ozone SIP for the "Severe" classification and the 2015 Ozone SIP for the "Moderate" classification, consistent with the requirements of the federal act.

Statutory Authority

The authority to establish emissions budgets and to establish criteria for transportation conformity determinations is included in the general authority to adopt a State Implementation Plan (SIP) set out in Section 25-7-105(1), C.R.S.

Purpose

On March 12, 2008, the Environmental Protection Agency (EPA) revised the national ambient air quality standard (NAAQS) for ozone to 0.075 ppm (2008 NAAQS). Colorado's Denver Metro North Front Range (DMNFR) was classified as marginal, effective July 20, 2012, with an attainment date of July 20, 2015. Effective November 7, 2022, EPA classified the DMNFR to severe, setting an attainment deadline of July 20, 2027 (87 Fed. Reg. 60926 (October 7, 2022)).

On October 26, 2015, the EPA revised the NAAQS for ozone to 0.070 ppm (2015 NAAQS). Colorado's Denver Metro North Front Range (DMNFR) was classified as marginal, effective August 3, 2018, with an attainment date of August 3, 2021. On November 30, 2021, effective December 30, 2021, EPA expanded the 2015 ozone nonattainment area boundary to include all of Weld County. Effective November 7, 2022, EPA classified the DMNFR and northern Weld County to moderate, setting an attainment deadline of August 3, 2024 (87 Fed. Reg. 60897 (October 7, 2022)).

The Air Quality Standards Regulation, Section V. contains motor vehicle emission budgets for attainment/maintenance areas in Colorado. Motor vehicle emission budgets are utilized to assess conformity with Colorado's Ozone SIP. Section 176(c) of the Clean Air Act requires that transportation plans, transportation improvement programs (TIPs), and projects adopted by a metropolitan planning organization are consistent with (i.e., conform to) the appropriate SIP. In the DM/NFR Nonattainment Area, the metropolitan planning organization responsible for such projects is the Denver Regional Council of Governments or "DRCOG" and the North Front Range Metropolitan Planning Organization or "NFRMPO." Conformity with the appropriate SIP means that the transportation activities will not cause new violations of the NAAQS, worsen existing violations, or delay timely attainment of the NAAQS. Pursuant to EPA regulations implementing Section 176(c) (40 CFR Parts 51 and 93), mobile source emissions resulting from such plans and programs ultimately must be demonstrated to be consistent with the motor vehicle emission budgets set forth in the applicable SIP. See 40 CFR Part 93. Motor vehicle emission budgets are required by federal regulations which afford the State flexibility in determining what the budgets should be. See 40 CFR 51.390.

The Commission revised the motor vehicle emission budgets to reflect budgets used in the 2015 Moderate SIP and to include placeholders for the budgets for the 2008 Severe SIP. The Commission will consider the 2008 Severe SIP budgets in 2023 after updates to the 2008 Severe SIP emissions inventory have been completed. Specifically, the DMNFR and northern Weld County budgets were adopted as follows: the regional emissions budget for NO_x at 31.6 tons per day; the regional emissions budget for VOCs at 35.2 tons per day; the southern sub-regional emissions budget for NO_x at 26.8 tons per day; the southern sub-regional emissions budget for VOCs at 30.0 tons per day; the northern sub-regional emissions budget for NO_x at 4.8 tons per day, and; the northern sub-regional emissions budget for VOCs at 5.2 tons per day.

The Commission also adopted a map reflecting the inclusion of northern Weld County by EPA in the 2015 ozone nonattainment area.

Further, the Commission corrected any typographical, grammatical and formatting errors found within the regulation.

Federal Requirements

The emission budgets established in this rule support the fulfillment of requirements for severe and moderate nonattainment areas under the 2008 and 2015 8-Hour Ozone NAAQS, respectively, and therefore comply with, and do not exceed, federal requirements.

Findings pursuant to Section 25-7-110.8

The motor vehicle emission budgets are based on EPA-approved methods for calculating VOC and NOx emissions as required by federal regulations. They reduce the potential for air pollution by capping emissions from mobile sources. All methodologies and information made available by interested parties have been considered. In proposing these revisions, the Division chose the most-cost-effective alternative.

VIII.GG. Revision to Emission Budgets for Nonattainment Areas in the State of Colorado

Adopted: December 15, 2023

This Statement of Basis, Specific Statutory Authority and Purpose complies with the requirements of the State Administrative Procedure Act § 24-4-101, C.R.S. et seq., the Colorado Air Pollution Prevention and Control Act § 25-7-101, C.R.S. et seq. (the Act), and the Air Quality Control Commission (Commission) Procedural Rules, 5 CCR 1001-1., CRS.

Basis

The Commission revised the emission budgets contained in the Air Quality Standards, Designations and Emission Budgets Regulation to reflect emission budgets used in the 2008 Ozone SIP for the “Severe” classification, consistent with the requirements of the federal act.

Statutory Authority

The authority to establish emissions budgets and to establish criteria for transportation conformity determinations is included in the general authority to adopt a State Implementation Plan (SIP) set out in Section 25-7-105(1), C.R.S.

Purpose

On October 7, 2022, EPA reclassified the Denver Metro/North Front Range (DM/NFR) to severe for the 2008 8-hour Ozone National Ambient Air Quality Standard of 75 parts per billion (ppb) (2008 ozone NAAQS), after 2019-2021 ozone data failed to show attainment. See 86 Fed. Reg. 60926. Separately, EPA has also designated the DM/NFR as marginal nonattainment for the 2015 ozone NAAQS of 70 ppb, effective August 3, 2018 (83 Fed. Reg. 25776 (June 4, 2018)). On November 30, 2021, EPA expanded the boundary of the 2015 ozone nonattainment area to include all of Weld County, effective December 30, 2021 (86 Fed. Reg. 67864). On October 7, 2022, EPA reclassified the DM/NFR and northern Weld County to moderate, after 2019-2021 ozone data failed to show attainment. See 86 Fed. Reg. 60897.

The Air Quality Standards Regulation, Section V. contains motor vehicle emission budgets for attainment/maintenance areas in Colorado. Motor vehicle emission budgets are utilized to assess conformity with Colorado's Ozone SIP. Section 176(c) of the Clean Air Act requires that transportation plans, transportation improvement programs (TIPs), and projects adopted by a metropolitan planning organization are consistent with (i.e., conform to) the appropriate SIP. In the DM/NFR Nonattainment Area, the metropolitan planning organization responsible for such projects is the Denver Regional Council of Governments or “DRCOG” and the North Front Range Metropolitan Planning Organization or “NFRMPO.” Conformity with the appropriate SIP means that the transportation activities will not cause new violations of the NAAQS, worsen existing violations, or delay timely attainment of the NAAQS. Pursuant to EPA regulations implementing Section 176(c) (40 CFR Parts 51 and 93), mobile source emissions resulting from such plans and programs ultimately must be demonstrated to be consistent with the motor vehicle emission budgets set forth in the applicable SIP. See 40 CFR Part 93. Motor vehicle emission budgets are required by federal regulations. See 40 CFR 51.390.

The Commission revised the motor vehicle emission budgets to reflect budgets used in the 2008 Severe SIP after considering updates to the SIP emissions inventory completed in 2023. Specifically, the DMNFR and northern Weld County budgets were adopted as follows: the regional emissions budget for NO_x at 21.7 tons per day; the regional emissions budget for VOCs at 27.0 tons per day; the southern sub-regional emissions budget for NO_x at 18.3 tons per day; the southern sub-regional emissions budget for VOCs at 23.0 tons per day; the northern sub-regional emissions budget for NO_x at 3.4 tons per day, and; the northern sub-regional emissions budget for VOCs at 4.0 tons per day.

Further, the Commission corrected any typographical, grammatical and formatting errors found within the regulation.

Federal Requirements

The emission budgets established in this rule support the fulfillment of requirements for severe and moderate nonattainment areas under the 2008 8-Hour Ozone NAAQS, respectively, and therefore comply with, and do not exceed, federal requirements.

Findings pursuant to Section 25-7-110.8

The motor vehicle emission budgets are based on EPA-approved methods for calculating VOC and NO_x emissions as required by federal regulations. They reduce the potential for air pollution by capping emissions from mobile sources. All methodologies and information made available by interested parties have been considered. In proposing these revisions, the Division chose the most-cost-effective alternative.

Editor's Notes

History

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Office of the Attorney General

Tracking number: 2023-00640

Opinion of the Attorney General rendered in connection with the rules adopted by the
Air Quality Control Commission

on 12/15/2023

5 CCR 1001-14

AIR QUALITY STANDARDS, DESIGNATIONS AND EMISSION BUDGETS

The above-referenced rules were submitted to this office on 12/20/2023 as required by section 24-4-103, C.R.S. This office has reviewed them and finds no apparent constitutional or legal deficiency in their form or substance.

January 02, 2024 11:31:51

Philip J. Weiser
Attorney General
by Kurtis Morrison
Deputy Attorney General

Permanent Rules Adopted

Department

Department of Public Health and Environment

Agency

Air Quality Control Commission

CCR number

5 CCR 1001-30

Rule title

5 CCR 1001-30 REGULATION NUMBER 26 Control of Emissions from Engines and Major Stationary Sources 1 - eff 02/14/2024

Effective date

02/14/2024

DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Air Quality Control Commission

REGULATION NUMBER 26

Control of Emissions from Engines and Major Stationary Sources

5 CCR 1001-30

[Editor's Notes follow the text of the rules at the end of this CCR Document.]

Outline of Regulation

PART A Applicability and General Provisions

I. General Provisions

Appendix A Colorado Ozone Nonattainment or Attainment Maintenance Areas

PART B Combustion Equipment and Major Source RACT

I. Control of Emissions from Engines

II. Control of Emissions from Stationary and Portable Combustion Equipment in the 8-Hour Ozone Control Area

III. Control of Emissions from Specific Major Sources of VOC and/or NO_x in the 8-Hour Ozone Control Area

IV. Control of Emissions from Breweries in the 8-hour Ozone Control Area

V. Control of Emissions from Foam Manufacturing in the 8-hour Ozone Control Area

VI. Control of Emissions from Bakeries in the 8-hour Ozone Control Area

VII. Control of Emissions from Poultry Waste Processing in the 8-hour Ozone Control Area

VIII. Control of Emissions from Industrial Waste Facilities in the 8-hour Ozone Control Area

PART C Statements of Basis, Specific Statutory Authority and Purpose

Pursuant to Colorado Revised Statutes § 24-4-103 (12.5), materials incorporated by reference are available for public inspection during normal business hours, or copies may be obtained at a reasonable cost from the Air Quality Control Commission (the Commission), 4300 Cherry Creek Drive South, Denver, Colorado 80246-1530. The material incorporated by reference is also available through the United States Government Printing Office, online at www.govinfo.gov. Materials incorporated by reference are those editions in existence as of the date indicated and do not include any later amendments.

PART A General Provisions

I. General Provisions

I.A. Definitions

- I.A.1. “8-Hour Ozone Control Area” means the Counties of Adams, Arapahoe, Boulder (includes part of Rocky Mountain National Park), Douglas, and Jefferson; the Cities and Counties of Denver and Broomfield; and the following portions of the Counties of Larimer and Weld:
- I.A.1.a. For Larimer County (includes part of Rocky Mountain National Park), that portion of the county that lies south of a line described as follows: Beginning at a point on Larimer County’s eastern boundary and Weld County’s western boundary intersected by 40 degrees, 42 minutes, and 47.1 seconds north latitude, proceed west to a point defined by the intersection of 40 degrees, 42 minutes, 47.1 seconds north latitude and 105 degrees, 29 minutes, and 40.0 seconds west longitude, thence proceed south on 105 degrees, 29 minutes, 40.0 seconds west longitude to the intersection with 40 degrees, 33 minutes and 17.4 seconds north latitude, thence proceed west on 40 degrees, 33 minutes, 17.4 seconds north latitude until this line intersects Larimer County’s western boundary and Grand County’s eastern boundary.
- I.A.1.b. For Weld County, that portion of the county that lies south of a line described as follows: Beginning at a point on Weld County’s eastern boundary and Logan County’s western boundary intersected by 40 degrees, 42 minutes, 47.1 seconds north latitude, proceed west on 40 degrees, 42 minutes, 47.1 seconds north latitude until this line intersects Weld County’s western boundary and Larimer County’s eastern boundary.
- I.A.2. “Denver 1-Hour Ozone Attainment/Maintenance Area” means the Counties of Jefferson and Douglas, the Cities and Counties of Denver and Broomfield, Boulder County (excluding Rocky Mountain National Park), Adams County west of Kiowa Creek, and Arapahoe County west of Kiowa Creek.
- I.A.3. “Northern Weld County” means the portion of the county that does not lie south of a line described as follows: Beginning at a point on Weld County’s eastern boundary and Logan County’s western boundary intersected by 40 degrees, 42 minutes, 47.1 seconds north latitude, proceed west on 40 degrees, 42 minutes, 47.1 seconds north latitude until this line intersects Weld County’s western boundary and Larimer County’s eastern boundary.

- I.A.4. "Volatile Organic Compound (VOC)" means any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions, except those listed in Section II.B. as having negligible photochemical reactivity. VOC may be measured by a reference method, an equivalent method, an alternative method, or by procedures specified under 40 CFR Part 60 (July 1, 2022). A reference method, an equivalent method, or an alternative method, however, may also measure nonreactive organic compounds. In such cases, an owner or operator may exclude the compounds listed in Section II.B. when determining compliance with a standard if the amount of such compounds is accurately quantified, and such exclusion is approved by the Division. As a precondition to excluding such compounds as VOC, or at any time thereafter, the Division may require an owner or operator to provide monitoring or testing methods and results demonstrating, to the satisfaction of the Division, the amount of negligible-reactive compounds in the source's emissions.

I.B. Exemptions

Emissions of the organic compounds listed as having negligible photochemical reactivity in the common provisions definition of Negligibly Reactive Volatile Organic Compound are exempt from the provisions of this regulation.

I.C. New Sources

All new sources shall utilize controls representing RACT, pursuant to applicable provisions in Regulation Number 7, Regulation Number 24, Regulation Number 25, Regulation Number 26 and Regulation Number 3, Part B, Section III.D., upon commencement of operation.

I.D. Alternative Control Plans and Test Methods

- I.D.1. Sources subject to specific requirements of this regulation shall submit for approval as a revision to the State Implementation Plan:

I.D.1.a. Any alternative emission control plan or compliance method other than control options specifically allowed in the applicable regulation. Such alternative control plans shall provide control equal to or greater than the emission control or reduction required by the regulation, unless the source contends that the control level required by the regulation does not represent RACT for their specific source.

I.D.1.b. Any alternative test method or procedure not specifically allowed in the applicable regulation.

- I.D.2. No alternative submitted pursuant to this Section II.D. is effective until the alternative is approved as a revision to the State Implementation Plan.

I.E. The provisions marked by (State Only) are not federally enforceable, unless otherwise identified.

Appendix A Colorado Ozone Nonattainment or Attainment Maintenance Areas

I. Chronology of Attainment Status

Denver Metropolitan Area Only

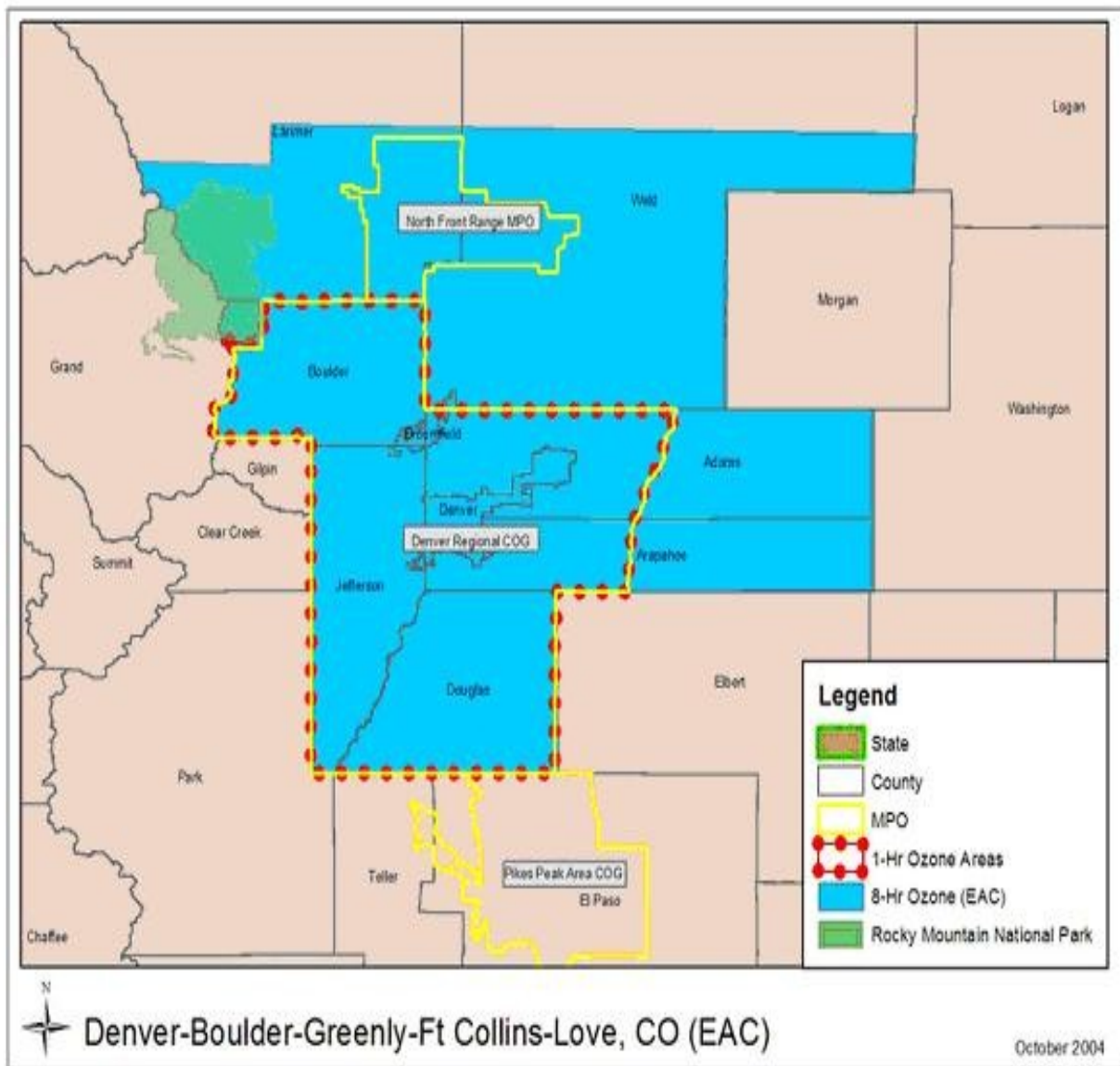
1978	Denver 1-hour Ozone Nonattainment Area designation first becomes effective in 7-county Denver Metropolitan Area
10/11/01	Denver 1-hour Ozone Attainment Maintenance Area designation replaces non-attainment designation and becomes effective in 7-county Denver Metropolitan Area
9/2/05	1-hour Ozone National Ambient Air Quality Standard is Revoked in Colorado except for the Denver 1-hour Ozone Attainment Maintenance Area.

Denver Metropolitan Area and North Front Range

10/11/01	1-hour attainment maintenance area replaces non-attainment designation for the Denver Metro Area/North Front Range Area
4/15/04	EPA designates the Denver Metro Area/North Front Range region as an 8-hour ozone non-attainment area, designation deferred due to the implementation of the Early Action Compact
11/20/07	Denver 8-hour ozone non-attainment designation (1997 NAAQS) becomes effective in 9 county Denver Metropolitan Area
7/20/2012	Denver 8-hour ozone non-attainment designation (2008 NAAQS) becomes effective in 9 county Denver Metropolitan Area
8/3/2018	Denver 8-hour ozone nonattainment designation (2015 NAAQS) becomes effective in 9 county Denver Metropolitan Area
12/31/2021	EPA modification of the 9 county Denver Metropolitan Area 8-hour ozone nonattainment designation (2015 NAAQS) to include the portion of northern Weld County defined in Part A

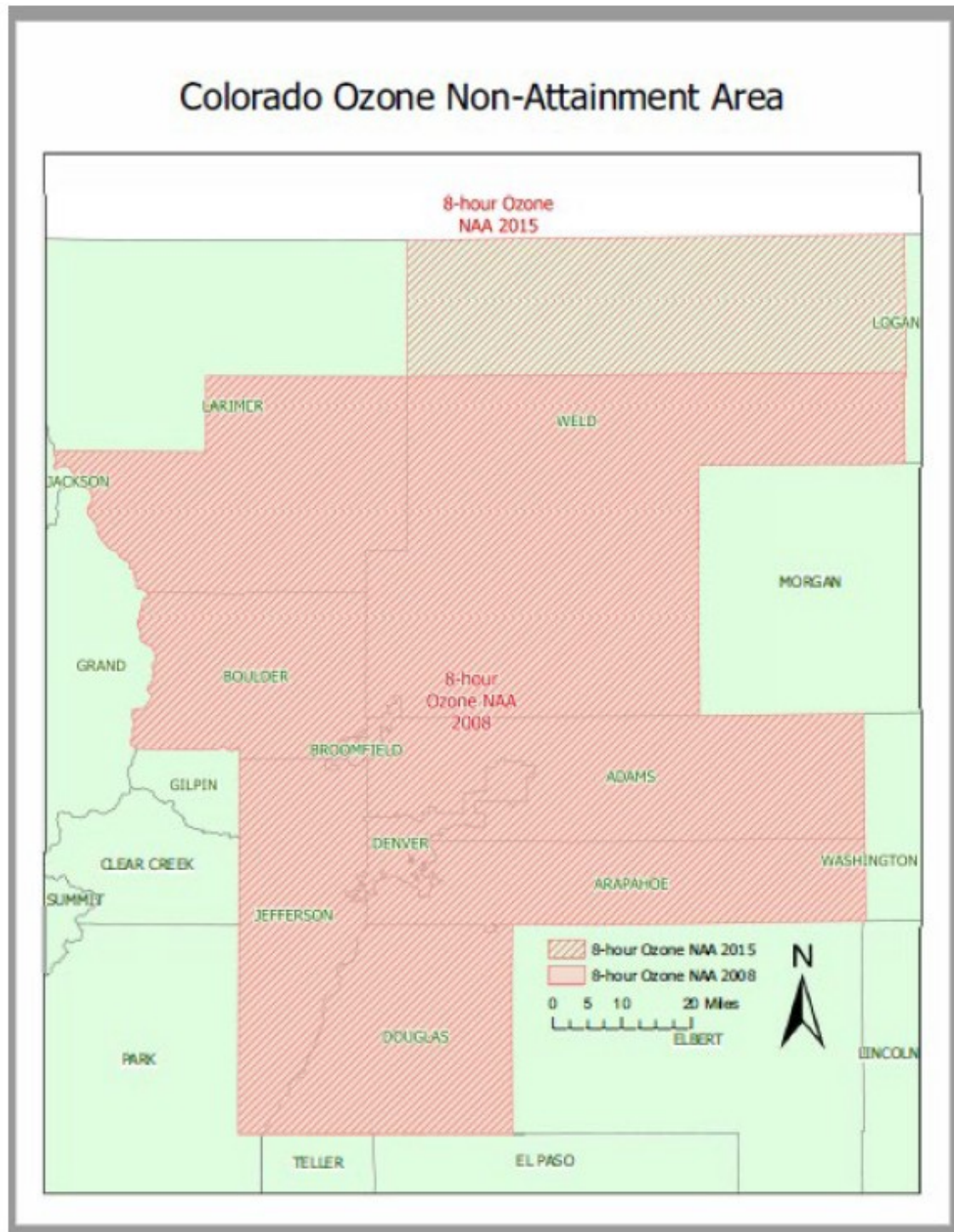
II. Maps

Denver Metropolitan Area and North Front Range (2008 Ozone NAAQS)



Prepared by FHWA - HEPN-40

Denver Metropolitan Area and North Front Range and northern Weld County (2015 ozone NAAQS)



PART B Combustion Equipment and Major Source RACT

I. Control of Emissions from Engines

I.A Requirements for new and existing engines.

- I.A.1. The owner or operator of any natural gas-fired stationary or portable reciprocating internal combustion engine with a manufacturer's design rate greater than 500 horsepower commencing operations in the 8-hour Ozone Control Area on or after June 1, 2004 shall employ air pollution control technology to control emissions, as provided in Section I.B.
- I.A.2. Any existing natural gas-fired stationary or portable reciprocating internal combustion engine with a manufacturer's design rate greater than 500 horsepower, which existing engine was operating in the 8-hour Ozone Control Area prior to June 1, 2004, shall employ air pollution control technology on and after May 1, 2005, as provided in Section I.B.
- I.A.3. Stationary natural gas fired reciprocating internal combustion engines state-wide with a manufacturer's design rate greater than or equal to 1000 horsepower are subject to Section I.D.5.

I.B. Air pollution control technology requirements

- I.B.1. For rich burn reciprocating internal combustion engines, a non-selective catalyst reduction and an air fuel controller shall be required. A rich burn reciprocating internal combustion engine is one with a normal exhaust oxygen concentration of less than 2% by volume.
- I.B.2. For lean burn reciprocating internal combustion engines, an oxidation catalyst shall be required. A lean burn reciprocating internal combustion engine is one with a normal exhaust oxygen concentration of 2% by volume, or greater.
- I.B.3. The emission control equipment required by this Section I.B shall be appropriately sized for the engine and shall be operated and maintained according to manufacturer specifications.

I.C. The air pollution control technology requirements in Sections I.A. and I.B. do not apply to:

- I.C.1. Non-road engines, as defined in Regulation Number 3, Part A, Section I.B.36.
- I.C.2. Reciprocating internal combustion engines that the Division has determined will be permanently removed from service or replaced by electric units on or before May 1, 2007. The owner or operator of such an engine shall provide notice to the Division of such intent by May 1, 2005 and shall not operate the engine identified for removal or replacement in the 8-hour Ozone Control Area after May 1, 2007.
- I.C.3. Any emergency power generator exempt from APEN requirements pursuant to Regulation Number 3, Part A.

- I.C.4. Any lean burn reciprocating internal combustion engine operating in the 8-hour Ozone Control Area prior to June 1, 2004, for which the owner or operator demonstrates to the Division that retrofit technology cannot be installed at a cost of less than \$5,000 per ton of VOC emission reduction. Installation costs and the best information available for determining control efficiency shall be considered in determining such costs. In order to qualify for such exemption, the owner or operator must submit an application making such a demonstration, together with all supporting documents, to the Division by May 1, 2005. Any reciprocating internal combustion engine qualifying for this exemption shall not be moved to any other location within the 8-hour Ozone Control Area.
- I.D. Control of emissions from new, modified, existing, and relocated natural gas fired reciprocating internal combustion engines.
 - I.D.1. (State Only) Exemptions
 - I.D.1.a. The requirements of this Section I.D. do not apply to any engine having actual uncontrolled emissions below permitting thresholds listed in Regulation Number 3, Part B.
 - I.D.1.b. Internal combustion engines that are subject to an emissions control requirement in a federally maximum achievable control technology (MACT) standard under 40 CFR Part 63 (July 1, 2022), a Best Available Control Technology (BACT) limit, or a New Source Performance Standard (NSPS) under 40 CFR Part 60 (July 1, 2022) are not subject to Section I.D.3.
 - I.D.2. (State Only) General Provisions
 - I.D.2.a. At all times, including periods of start-up and shutdown, engines and their associated equipment must be maintained and operated in a manner consistent with good air pollution control practices for minimizing emissions. Determination of whether or not acceptable operation and maintenance procedures are being used will be based on information available to the Division, which may include, but is not limited to, monitoring results, opacity observations, review of operation and maintenance procedures, and inspection of the source.
 - I.D.2.b. All engines and their associated equipment must be operated and maintained pursuant to the manufacturing specifications or equivalent to the extent practicable, and consistent with technological limitations and good engineering and maintenance practices. The owner or operator must keep manufacturer specifications or equivalent on file.
 - I.D.2.c. Any of the effective dates for installation of controls on internal combustion engines as required in Section I.D.3. may be extended at the Division's discretion for good cause shown.
 - I.D.3. (State Only) New, Modified and Relocated Natural Gas Fired Reciprocating Internal Combustion Engines

I.D.3.a. Except as provided in Section I.D.3.b., the owner or operator of any natural gas fired reciprocating internal combustion engine that is either constructed or relocated to the state of Colorado from another state, on or after the date listed in Table 1 shall operate and maintain each engine according to the manufacturer's written instructions or procedures to the extent practicable and consistent with technological limitations and good engineering and maintenance practices over the entire life of the engine so that it achieves the emission standards required in Section I.D.3.b. Table 1.

I.D.3.b. Actual emissions from natural gas fired reciprocating internal combustion engines shall not exceed the emission performance standards in Table 1 as expressed in units of grams per horsepower-hour (G/hp-hr)

TABLE 1				
Maximum Engine Hp	Construction or Relocation Date	Emission Standards in G/hp-hr		
		NOx	CO	VOC
< 100 Hp	Any	NA	NA	NA
≥ 100 Hp and < 500 Hp	On or after January 1, 2008	2.0	4.0	1.0
	On or after January 1, 2011	1.0	2.0	0.7
≥ 500 Hp	On or after July 1, 2007	2.0	4.0	1.0
	On or after July 1, 2010	1.0	2.0	0.7

**These engines may also be subject to emission standards under Section I.D.5.*

I.D.4. Existing Natural Gas Fired Reciprocating Internal Combustion Engines

I.D.4.a. (Regional Haze SIP) Rich Burn Reciprocating Internal Combustion Engines

I.D.4.a.(i) Except as provided in Sections I.D.4.a.(i)(B) and (C) and I.E.4.a.(ii), all rich burn reciprocating internal combustion engines with a manufacturer's name plate design rate greater than 500 horsepower, constructed or modified before February 1, 2009 shall install and operate both a non-selective catalytic reduction system and an air fuel controller by July 1, 2010. A rich burn reciprocating internal combustion engine is one with a normal exhaust oxygen concentration of less than 2% by volume.

I.D.4.a.(i)(A) All control equipment required by this Section I.D.4.a. shall be operated and maintained pursuant to manufacturer specifications or equivalent to the extent practicable, and consistent with technological limitations and good engineering and maintenance practices. The owner or operator shall keep manufacturer specifications or equivalent on file.

I.D.4.a.(i)(B) Internal combustion engines that are subject to an emissions control requirement in a federal maximum achievable control technology ("MACT") standard under 40 CFR Part 63 (July 1, 2022), a Best Available Control Technology ("BACT") limit, or a New Source Performance Standard under 40 CFR Part 60 (July 1, 2022) are not subject to this Section I.D.4.a.

I.D.4.a.(i)(C) The requirements of this Section I.D.4.a. do not apply to any engine having actual uncontrolled emissions below permitting thresholds listed in Regulation Number 3, Part B.

I.D.4.a.(ii) Any rich burn reciprocating internal combustion engine constructed or modified before February 1, 2009, for which the owner or operator demonstrates to the Division that retrofit technology cannot be installed at a cost of less than \$ 5,000 per ton of combined volatile organic compound and nitrogen oxides emission reductions (this value shall be adjusted for future applications according to the current day consumer price index) is exempt complying with Section I.D.4.a. Installation costs and the best information available for determining control efficiency shall be considered in determining such costs. In order to qualify for such exemption, the owner or operator must submit an application making such a demonstration, together with all supporting documents, to the Division by August 1, 2009.

I.D.4.b. (State Only) Lean Burn Reciprocating Internal Combustion Engines

I.D.4.b.(i) Except as provided in Section I.D.4.b.(ii), all lean burn reciprocating internal combustion engines with a manufacturer's nameplate design rate greater than 500 horsepower shall install and operate an oxidation catalyst by July 1, 2010. A lean burn reciprocating internal combustion engine is one with a normal exhaust oxygen concentration of 2% by volume, or greater.

I.D.4.b.(ii) Any lean burn reciprocating internal combustion engine constructed or modified before February 1, 2009, for which the owner or operator demonstrates to the Division that retrofit technology cannot be installed at a cost of less than \$ 5,000 per ton of volatile organic compound emission reduction (this value shall be adjusted for future applications according to the current day consumer price index) is exempt complying with Section I.D.4.b.(i). Installation costs and the best information available for determining control efficiency shall be considered in determining such costs. In order to qualify for such exemption, the owner or operator must submit an application making such a demonstration, together with all supporting documents, to the Division by August 1, 2009.

I.D.4.c. (Ozone SIP) Engines with a Manufacturer's Design Rate Greater than or Equal to 1000 horsepower in the 8-hour Ozone Control Area or Northern Weld County.

I.D.4.c.(i) The owner or operator of an engine identified in Table A must comply with the current NOx allowance specified for that engine by the compliance date indicated.

I.D.4.c.(ii) Owners or operators of engines identified in Table A must keep the following records for a period of five (5) years and make records available to the Division upon request.

I.D.4.c.(ii)(A) APENs submitted for a Table A engine on or after May 1, 2021.

I.D.4.c.(ii)(B) Records documenting engine retrofit or replacement.

I.D.4.c.(ii)(C) Results of the most recent performance test if updated permitted emission factors are used to comply with the NOx emission requirements.

Table A					
Facility AIRS ID	AIRs Point(s)	Prior NOx allowance (tpy)	Current NOx allowance (tpy)	Emission Reduction method	Compliance Date
001-0025	004	234.2	32.2	Retrofit	05/2023
001-0025	006	128.0	15.9	Retrofit	05/2023
001-0025	007	128.0	15.9	Retrofit	05/2022
01-0025	032	234.2	32.2	Retrofit	05/2022
001-0036	005	150.50	8.6	Permitted Hours Reduced	05/2023
001-0036	005	150.50	8.6	Permitted Hours Reduced	05/2023
005-0055	001	148.92	20.6	Retrofit	05/2022
005-0055	001	148.92	20.6	Retrofit	05/2022
005-0055	001	148.92	20.6	Retrofit	05/2022
005-0055	011	133.78	18.6	Retrofit	05/2022
123-0015	051	11.9	9.5	Retrofit	05/2022
123-0015	052	24.0	9.5	Retrofit	05/2022
123-0015	053	23.8	9.5	Retrofit	05/2022
123-0015	055	23.8	9.5	Retrofit	05/2022
123-0015	056	11.9	9.5	Retrofit	05/2022
123-0015	057	24.0	9.28	Retrofit	05/2022
123-0015	060	19.3	7.7	Retrofit	05/2022
123-0015	081	23.8	9.5	Retrofit	05/2022
123-0048	015	16.9	6.3	Retrofit	05/2022
123-0049	101	21.2	8.5	Retrofit	05/2023
123-0049	102	7.8	6.2	Retrofit	05/2023
123-0049	103	26.1	10.4	Retrofit	05/2023
123-0049	107	16.3	6.2	Retrofit	05/2023
123-0049	108	13.0	10.4	Retrofit	05/2023
123-0049	110	18.6	7.1	Retrofit	05/2023
123-0049	113	16.3	6.2	Retrofit	05/2023
123-0049	114	7.8	6.2	Retrofit	05/2023
123-0049	140	14.3	11.4	Retrofit	05/2023
123-0098	001	18.19	10.51	Permitted EF Change	05/2021

Table A					
Facility AIRS ID	AIRs Point(s)	Prior NOx allowance (tpy)	Current NOx allowance (tpy)	Emission Reduction method	Compliance Date
123-0098	039	15.78	12.62	Permitted EF Change	05/2021
123-0099	106	21.24	8.5	Retrofit	05/2022
123-0099	107	24.0	8.5	Retrofit	05/2022
123-0099	108	8.65	6.9	Retrofit	05/2022
123-0099	109	21.24	8.5	Retrofit	05/2022
123-0099	110	24.0	8.5	Retrofit	05/2022
123-0184	018	25.1	8.7	Retrofit	05/2022
123-0184	019	8.7	6.9	Retrofit	05/2022
123-0468	011	18.9	15.5	Retrofit	05/2022
123-0468	012	19.5	15.5	Replace	05/2022
123-0595	002	30.82	13.0	Retrofit	05/2023
123-0595	003	30.82	13.0	Retrofit	05/2023
123-0595	004	30.82	13.0	Retrofit	05/2023
123-0595	006	25.69	10.8	Retrofit	05/2023
123-0595	007	25.69	10.8	Retrofit	05/2023
123-0595	008	27.12	11.4	Retrofit	05/2023
123-1351	005	12.8	10.4	Retrofit	05/2022
123-9E80	008	0.00	0.00	Replace	05/2022

I.D.4.c.(iii) The owner or operator of an engine identified in Table B must shutdown that engine by the compliance date indicated.

I.D.4.c.(iv) Owners or operators of engines identified in Table B must keep the following records for a period of five (5) years and make records available to the Division upon request.

I.D.4.c.(iv)(A) APENs cancellations submitted for a Table B engine on or after May 1, 2021.

Table B			
Facility AIRS ID	AIRs Point(s)	Previously Permitted NOx allowance (tpy)	Shutdown Compliance Date
123-0057	004	90.2	05/2022
123-0473	015	6.42	05/2021
123-1351	001	15.8	05/2022
123-9CD2	004	5.81	05/2021
123-9CD2	005	6.39	05/2021

I.D.5. (State Only) Additional Requirements for Natural Gas Fired Reciprocating Internal Combustion Engines

I.D.5.a. Applicability

I.D.5.a.(i) This Section I.D.5. applies to stationary natural gas fired reciprocating internal combustion engines state-wide with a manufacturer's design rate greater than or equal to 1000 horsepower.

I.D.5.a.(i)(A) For purposes of this Section I.D.5., modified means any physical change to the engine or change in method of operation that results in an increase in the emission rate of any air pollutant, and does not include any physical or operational changes excluded by 40 C.F.R. 60.14(e).

I.D.5.a.(i)(B) For purposes of this Section I.D.5., placed in service means the bringing of an engine on-site for use. The placed in service date is the date the engine begins to operate. The following is not considered placed in service: (1) moving an engine subject to an Alternative Company-Wide Compliance Plan to another site with the same owner or operator; (2) for engines in service on or before January 30, 2024, replacement under an authorized alternative operating scenario.

I.D.5.a.(i)(C) For purposes of this Section I.D.5., relocated means the bringing of an engine into the 8-Hour Ozone Control Area from outside the 8-Hour Ozone Control Area or the bringing of an engine into the State of Colorado from outside the State of Colorado. The relocation date is the date the subject engine begins to operate.

I.D.5.a.(ii) Exemptions.

I.D.5.a.(ii)(A) Engines that burn less than 100 MMBtu per year of natural gas on a rolling-12-month basis are not subject to Sections I.D.5.b., I.D.5.d., I.D.5.e., I.D.5.f.(i)-(iii) and (v)-(vi), or I.D.5.g.

I.D.5.a.(ii)(B) Non-road engines, as defined in Regulation Number 3, Part A, Section I.B.36 are not subject to this Section I.D.5.

I.D.5.a.(ii)(C) Any emergency power generator exempt from APEN or construction permit requirements pursuant to Regulation Number 3, Parts A or B are not subject to this Section I.D.5.

I.D.5.a.(ii)(D) Emergency power generators that operate less than 250 hours per year on a rolling-12-month basis are not subject to Sections I.D.5.b., I.D.5.d., I.D.5.e., I.D.5.f.(i)-(iii) and (v)-(vi), or I.D.5.g.

I.D.5.b. Emission Standards for Engines Subject to Section I.D.5.a.

- I.D.5.b.(i) The owner or operator of any stationary natural gas fired reciprocating internal combustion engine that is placed in service, modified, or relocated after November 14, 2020, must comply with the emission standards in Table 2 upon placement in service, modification, or relocation, as applicable.
- I.D.5.b.(ii) The owner or operator of any stationary natural gas fired reciprocating internal combustion engine not subject to Section I.D.5.b.(i) must comply with the emission standards in Table 2 in accordance with the timing set forth Section I.D.5.b.(v).

TABLE 2			
Engine Type	Emission Standards (g/hp-hr)		
	NOx	CO	VOC
4-Stroke Lean Burn engines in service on or before November 14, 2020, (unless subject to a more stringent emission standard under Section I.D.3.b, above)	1.2	2.0	0.7
<u>Rich Burn engines in service on or before November 14, 2020</u>	0.8	2.0	0.7
<u>4-Stroke Lean Burn engines placed in service, modified, or relocated after November 14, 2020</u>	0.7	2.0	0.7
<u>Rich Burn engines placed in service, modified, or relocated after November 14, 2020</u>	0.5	2.0	0.7
<u>4-Stroke Lean Burn engines placed in service, modified, or relocated after January 30, 2024</u>	0.5	2.0	0.7
<u>2-Stroke Lean Burn engines</u>	3.0	2.0	0.7

- I.D.5.b.(iii) By May 1, 2021, owners and operators of an engine placed in service on or before November 14, 2020, that is subject to an emission standard in Table 2 must submit a notification to the Division containing the following information:

- I.D.5.b.(iii)(A) The list of engines subject to an emission standard in Table 2, including AIRS number, location (inside or outside the 8-Hour Ozone Control Area and facility name), historical annual hours of operation averaged over calendar years 2017, 2018, and 2019, manufacturer model, serial number, horsepower, and engine configuration. The notification must also identify or calculate the g/hp-hr limit in an existing permit and the g/hp-hr at which the engine is operating on or before November 14, 2020, if different than the permitted rate. Engine configuration (e.g. rich burn or lean burn) for purposes of the emission standards in Table 2 is determined by the characterization on the engine's permit or APEN as of May 1, 2021. If the engine configuration is not identified in a permit or APEN, the owner or operator must submit an APEN with the current configuration information as determined by the owner or operator by May 1, 2021 to the Division.
- I.D.5.b.(iii)(B) An identification of the applicable standard and a declaration as to whether each subject engine meets the applicable standard as of May 1, 2021. If an engine will meet the applicable standard through a permit modification only, as described in Section I.D.5.b.(iv)(A), the declaration should note the date of permit modification submittal.
- I.D.5.b.(iii)(C) For all engines that do not meet the applicable emission standard as of May 1, 2021 or that cannot comply through a permit modification described in Section I.D.5.b.(iv)(A), a declaration of what action the owner or operator will take to meet the standard (e.g., control equipment installation, retrofit, replacement, electrification, shut-down). This declaration can be amended at any time prior to the applicable compliance date for that engine.
- I.D.5.b.(iii)(D) The compliance deadline for each engine under Sections I.D.5.b.(i) or I.D.5.b.(v). An owner or operator may change a proposed compliance deadline for an engine subject to Section I.D.5.b.(v)(B) prior to that engine's compliance deadline, only after submittal of an updated notification to the Division that includes the updated compliance date and a demonstration that the requirements of Table 3 are met.
- I.D.5.b.(iii)(E) Owners or operators that submit an Alternative Company-Wide Compliance Plan under Section I.D.5.c. are not subject to this Section I.D.5.b.(iii) for the emission standards in Table 2 for the engines covered by the Alternative Company-Wide Compliance Plan.

I.D.5.b.(iv) Permit Modification.

I.D.5.b.(iv)(A) An engine in service on or before November 14, 2020 that requires only a modification of an existing permit to meet the emission standards in this Section I.D.5.b. must submit a complete permit application containing the necessary limitations no later than May 1, 2021.

I.D.5.b.(iv)(B) For any engine not subject to Section I.D.5.b.(iv)(A), owners and operators must modify existing permits to reflect the emission standards or other operating conditions necessary to achieve compliance with Table 2. Complete permit applications must be submitted to the Division at least 365 days prior to the date established in Section I.D.5.b.(iii)(D) for that engine.

I.D.5.b.(v) Compliance Deadlines for engines subject to Section I.D.5.b.(ii).

I.D.5.b.(v)(A) Engines that comply with the emission standards on or before November 14, 2020, or are subject to Section I.D.5.b.(iv)(A) must meet the emission standards in Table 2 by May 1, 2022.

I.D.5.b.(v)(B) Engines not subject to Section I.D.5.b.(v)(A) must meet the emission standards in Table 2 in accordance with the timing set forth in Table 3.

TABLE 3					
Location of Subject Engines by Owner or Operator	Compliance Deadlines				
	May 1, 2022	May 1, 2023	May 1, 2024	May 1, 2025	May 1, 2026
	Percent (%) of engines that must comply with Table 2 limits				
Inside, or inside and outside, the 8-Hour Ozone Control Area	At least 34% of engines inside the 8-Hour Ozone Control Area	At least 67% of engines inside the 8-Hour Ozone Control Area; and at least 25% of engines outside the 8-Hour Ozone Control Area	100% of engines in the 8-Hour Ozone Control Area; and at least 50% of engines outside the 8-Hour Ozone Control Area	At least 75% of engines outside the 8-Hour Ozone Control Area	100% of all engines
Outside the 8-Hour Ozone Control Area only	At least 20%	At least 40%	At least 60%	At least 80%	100%

I.D.5.b.(vi) If an owner or operator replaces an engine subject to an emission standard under this Section I.D.5.b. with a different stationary natural gas fired reciprocating internal combustion engine, the replacement engine must:

- I.D.5.b.(vi)(A) if being placed under an alternative operating scenario pursuant to an existing Division issued permit, meet the same emission standard as the engine being replaced; or
- I.D.5.b.(vi)(B) if the owner or operator of an engine chooses to comply via an Alternative Company-Wide Compliance Plan under Section I.D.5.c., meet an emission standard at least as stringent as the engine being replaced as provided for in the applicable Alternative Company-Wide Compliance Plan.

I.D.5.c. Alternative Company-Wide Compliance Plan.

- I.D.5.c.(i) Owners and operators with five or more engines that are subject to Section I.D.5.b.(v)(B) may comply with the NOx requirements of Section I.D.5.b. through an Alternative Company-Wide Compliance Plan. Any owner or operator electing to develop an Alternative Company-Wide Compliance Plan must submit a Compliance Plan that meets the requirements of Section I.D.5.c.
 - (ii) on or before May 1, 2021.
- I.D.5.c.(i)(A) Only engines subject to an emission standard in Table 2 and that were placed in service on or before the November 14, 2020, can be included in an Alternative Company-Wide Compliance Plan submitted pursuant to this Section I.D.5.c.
- I.D.5.c.(i)(B) Engines in an Alternative Company-Wide Compliance Plan must still meet the VOC and CO standards in Table 2 by the deadline established for that engine pursuant to Table 4.
- I.D.5.c.(i)(C) Owners and operators owned by the same parent company may collectively submit a Compliance Plan in accordance with this Section I.D.5.c. However, the Compliance Plan must be signed and certified by a responsible official from each owner or operator with engines subject to the Compliance Plan acknowledging that each owner and operator is jointly and severally liable for compliance with the Compliance Plan and the provisions of this Section I.D.5.c. No engine may be included in multiple Alternative Company-Wide Compliance Plans.
- I.D.5.c.(ii) The Compliance Plan must be submitted on the Division-approved form and include all of the following elements:
 - I.D.5.c.(ii)(A) A list of all of the engines that will rely on this Section I.D.5.c. to comply with the standards established in Section I.D.5.b. Each engine must be identified by AIRS number, location (inside or outside the 8-Hour Ozone Control Area and facility name), horsepower, manufacturer, model and serial number, historical annual operating hours (averaged over 2017, 2018, and 2019), and engine configuration.

I.D.5.c.(ii)(B) For each engine included in the Alternative Company-Wide Compliance Plan:

I.D.5.c.(ii)(B)(1) Identification of the most stringent NO_x emission standard (in g/hp-hr or converted to g/hp-hr, if not expressed as such in the applicable permit) and operating conditions applicable to the engine under any rule or permit condition in effect on or before November 14, 2020.

I.D.5.c.(ii)(B)(2) Identification of the g/hp-hr at which the engine is operating on or before November 14, 2020, if different than the rate identified in Section I.D.5.c.(ii)(B)(1).

I.D.5.c.(ii)(B)(3) The emission standards (in g/hp-hr) and any operating conditions with which each engine will comply under the Alternate Company-Wide Compliance Plan, including any intended shut-downs, including any modifications or changes made to comply with the VOC or CO standards in Table 2.

I.D.5.c.(ii)(B)(4) The date by which each engine will meet the emission standards or other operating conditions identified in Section I.D.5.c.(ii)(B)(3), consistent with Table 4.

I.D.5.c.(ii)(B)(5) The maximum allowable NO_x emissions (in tons/year) based on limits applicable on or before November 14, 2020, as identified in Section I.D.5.c.(ii)(B)(1).

I.D.5.c.(ii)(B)(6) The historic NO_x emissions (in tons/year) averaged over calendar years 2017, 2018 and 2019, based on actual operating hours and permitted emission standards.

I.D.5.c.(ii)(B)(7) The NO_x emissions that would be allowed on an annual basis (in tons/year) assuming the engine was complying with the emission standards established in Table 2.

I.D.5.c.(ii)(B)(8) Each engine's allowable NO_x emissions (in tons/year) when operated in accordance with limitations identified in Section I.D.5.c.(ii)(B)(3), including any increase in NO_x emissions that result from modifications or changes made to comply with the VOC or CO standards in Table 2.

I.D.5.c.(ii)(C) The total allowable NO_x emissions (in tons/year) calculated for all engines in the Alternative Company-Wide Compliance Plan, as specified in Section I.D.5.c.(ii)(B)(5).

- I.D.5.c.(ii)(D) The total NOx emissions (in tons/year) calculated for all engines in the Alternative Company-Wide Compliance Plan, as specified in Section I.D.5.c.(ii)(B)(6).
- I.D.5.c.(ii)(E) The total NOx emissions calculated for all engines included in the Alternate Company-Wide Compliance Plan assuming all engines were complying with the emission standards established in Table 2, as specified in Section I.D.5.c.(ii)(B)(7).
- I.D.5.c.(ii)(F) The total allowable NOx emissions (in tons/year) calculated for all engines included in the Alternate Company-Wide Compliance Plan, as specified in Section I.D.5.c.(ii)(B)(8).
- I.D.5.c.(ii)(G) A calculation of:
 - I.D.5.c.(ii)(G)(1) The difference between Section I.D.5.c.(ii)(C) and Section I.D.5.c.(ii)(F). This difference is called the "Plan Emission Reductions".
 - I.D.5.c.(ii)(G)(2) The difference between total historic NOx emissions as calculated in Section I.D.5.c.(ii)(D) and the total allowable NOx emissions (in tons/year) for all engines included in the Alternate Company-Wide Compliance Plan assuming all engines were complying with Table 2, as specified in Section I.D.5.c.(ii)(E).
 - I.D.5.c.(ii)(G)(3) The difference between total historic NOx emissions as calculated in Section I.D.5.c.(ii)(D) and the total allowable NOx emissions (in tons/year) for all engines included in the Alternate Company-Wide Compliance Plan, as specified in Section I.D.5.c.(ii)(F).
- I.D.5.c.(ii)(H) A demonstration that:
 - I.D.5.c.(ii)(H)(1) The total NOx emissions allowed under the Alternative Company-Wide Compliance Plan (Section I.D.5.c.(ii)(F)) are less than or equal to the total NOx emissions that would be allowed under Table 2 (Section I.D.5.c.(ii)(E)).
 - I.D.5.c.(ii)(H)(2) The reductions from emissions achieved by the Alternative Company-Wide Compliance Plan are greater than or equal to the reductions from actual emissions achieved by Table 2 (i.e. that the figure calculated in Section I.D.5.c.(ii)(G)(3) is greater than or equal to the figure calculated in Section I.D.5.c.(ii)(G)(2)).

- I.D.5.c.(ii)(I) A certification by the owner or operator that based on information and belief formed after reasonable inquiry, the statements and information in the Compliance Plan are true, accurate, and complete.
- I.D.5.c.(iii) Any owner or operator utilizing this Alternative Company-Wide Compliance Plan must meet the emission standards for NO_x, CO and VOC as identified in I.D.5.c.(ii)(B)(3) by the compliance deadlines listed in Table 4.
- I.D.5.c.(iv) Owners and operators must modify existing permits to reflect the emission standards or other operating conditions identified in the Compliance Plan (Section I.D.5.c.(ii)(B)(3)) for that engine. Permit applications must be submitted to the Division at least 365 days prior to the date established in Section I.D.5.c.(ii)(B)(4) for that engine.
- I.D.5.c.(v) Compliance Plan Updates. By May 1st of each year (beginning in 2022) and continuing through and including the final year of a Compliance Plan, an owner or operator must submit an update to the Compliance Plan with the following information:
 - I.D.5.c.(v)(A) For each engine, any change in location and any action taken under the Compliance Plan (e.g., permit modification applied for, engine retrofit completed, engine taken offline) and the date;
 - I.D.5.c.(v)(B) A calculation of the percentage of Plan Emission Reductions achieved as of the date of submittal of the update (in each compliance period and cumulatively);
 - I.D.5.c.(v)(C) Any changes made to the Compliance Plan (e.g. change in compliance date for an engine). No change to the compliance date for an engine can be made after the date established in the Compliance Plan for that engine.;
 - I.D.5.c.(v)(D) If ownership or operation of an engine in the Compliance Plan for which emission reductions were included in the calculation of Plan Emission Reductions was sold or transferred in the previous year, an identification of how the owner or operator will achieve the portion of Plan Emission Reductions attributed to that engine under the Compliance Plan (the difference between Section I.D.5.c.(ii)(B)(5) and (8)).
 - I.D.5.c.(v)(E) A certification by the owner or operator that based on information and belief formed after reasonable inquiry, the statements and information in the update are true, accurate, and complete.
- I.D.5.c.(vi) Nothing in this Section I.D.5.c exempts an engine that is part of an Alternative Company-Wide Compliance Plan from compliance with the performance testing, monitoring, recordkeeping or reporting requirements of this Section I.D.5.

TABLE 4					
Location of Subject Engines covered by the Alternative Company-Wide Compliance Plan	Compliance Deadlines				
	May 1, 2022	May 1, 2023	May 1, 2024	May 1, 2025	May 1, 2026
	Percent (%) of Plan Emission Reductions Achieved				
Inside, or inside and outside, the 8-Hour Ozone Control Area	At least 50% of Plan Emission Reductions from engines inside the 8-Hour Ozone Control Area	At least 75% of Plan Emission Reductions from engines inside the 8-Hour Ozone Control Area; and at least 25% of Plan Emission Reductions from engines outside the 8-Hour Ozone Control Area	100% of Plan Emission Reductions from engines inside the 8-Hour Ozone Control Area; and at least 50% of Plan Emission Reductions from engines outside the 8-Hour Ozone Control Area	At least 75% of Plan Emission Reductions from engines outside the 8-Hour Ozone Control Area	100% of Plan Emission Reductions
Outside the 8-Hour Ozone Control Area only	At least 20%	At least 40%	At least 60%	At least 80%	100%

I.D.5.d. Performance Testing

I.D.5.d.(i) Engines subject to this Section I.D.5. must conduct a performance test consistent with the requirements of this Section I.D.5.d.

I.D.5.d.(i)(A) The owner or operator of an engine subject to Section I.D.5.b.(ii) must conduct a performance test for NO_x, CO, and O₂ by May 1, 2021.

I.D.5.d.(i)(B) The owner or operator of an engine placed in service, modified, relocated or replaced after May 1, 2021 must conduct a performance test within 12 months of the date the engine is placed in service, modified, relocated or replaced.

I.D.5.d.(i)(C) The following engines are exempt from the requirements of this Section I.D.5.d.

I.D.5.d.(i)(C)(1) Engines subject to the performance testing requirements of 40 C.F.R. Part 60, Subpart JJJJ (July 1, 2019).

I.D.5.d.(i)(C)(2) Engines subject to at least semi-annual portable analyzer testing or ongoing performance testing in a permit issued on or before November 14, 2020.

- I.D.5.d.(i)(D) A performance test conducted in accordance with 40 C.F.R. §60.4244 (July 1, 2019) between January 1, 2020 and May 1, 2021 will satisfy the initial performance testing requirements in Section I.D.5.d.(i)(A).
- I.D.5.d.(ii) Performance tests must be conducted in accordance with the applicable reference test methods of 40 C.F.R. Part 60, Appendix A (July 1, 2019), and a test protocol submitted to the Division for review at least thirty (30) days prior to testing and in accordance with AQCC Common Provisions Regulation Section II.C.
- I.D.5.d.(iii) Tuning of an engine prior to the performance test required by this Section I.D.5.d is not a violation of this rule. However, readjustment of an engine set point following the performance test that would negatively impact the performance of the engine (i.e. result in increased emissions above applicable permit limits) is a violation of this rule.
- I.D.5.e. Monitoring. Except as provided in Section I.D.5.a.(ii), owners or operators of an engine subject to Section I.D.5.a must:
- I.D.5.e.(i) Beginning on May 1, 2022, conduct semi-annual portable analyzer monitoring for NO_x, CO, and O₂. At least one calendar month must separate the semi-annual tests.
- I.D.5.e.(i)(A) If the engine is operated for less than 200 hrs in any semi-annual period, then the portable analyzer monitoring need not occur during that semi-annual period (i.e. the engine does not need to be started for the sole purpose of portable monitoring).
- I.D.5.e.(i)(B) All portable analyzer testing required by this section must be conducted using the Division's Portable Analyzer Monitoring Protocol (version: March 2006).
- I.D.5.e.(i)(C) Tuning of an engine prior to semi-annual monitoring events required by this Section I.D.5.e.(i) is not a violation of this rule. However, readjustment of an engine set point following the monitoring event that would negatively impact the performance (i.e. result in increased emissions above applicable permit limits) of the engine is a violation of this rule.
- I.D.5.e.(i)(D) A performance test conducted pursuant to Section I.D.5.d., 40 C.F.R. Part 60, JJJJ, or a permit requirement may take the place of the next required semi-annual portable analyzer test required by this section.
- I.D.5.e.(i)(E) An engine subject to at least semi-annual portable analyzer testing requirements in an existing permit issued by the Division can comply with this Section I.D.5.e.(i) by complying with the testing requirements in the permit.

- I.D.5.e.(ii) Beginning May 1, 2021, if a catalyst is used to reduce emissions:
 - I.D.5.e.(ii)(A) Monitor the inlet temperature to the catalyst daily and conduct maintenance if the temperature is not within applicable limits.
 - I.D.5.e.(ii)(B) Measure the pressure drop across the catalyst monthly and conduct maintenance if the pressure drop is greater than 2 inches outside the baseline value established after each semi-annual portable analyzer monitoring.
 - I.D.5.e.(ii)(C) Engines that are subject to catalyst temperatures and catalyst pressure drop monitoring requirements in an existing permit issued by the Division or 40 C.F.R. Part 63, Subpart ZZZZ (July 1, 2019) satisfy the monitoring requirements of this Section I.D.5.e.(ii).
- I.D.5.e.(iii) Beginning May 1, 2021 or the date the engine is placed in service, modified, relocated or replaced (if later), install (if not already) and operate an hour meter or Division approved alternate method to continuously track the hours of operation of the subject engine.
- I.D.5.e.(iv) Conduct the following inspections and adjustments at least annually, unless otherwise specified, beginning in 2022
 - I.D.5.e.(iv)(A) Change oil and filters as necessary; and,
 - I.D.5.e.(iv)(B) Inspect air cleaners, fuel filters, hoses, and belts and clean or replace as necessary; and,
 - I.D.5.e.(iv)(C) Inspect spark plugs and replace as necessary; or,
 - I.D.5.e.(iv)(D) Conduct a combustion process adjustment according to the manufacturer recommended procedures and schedule. Alternatively, the owner or operator may rely on a combustion process adjustment conducted in accordance with requirements and schedules of a New Source Performance Standard in 40 CFR Part 60 (July 1, 2022) or National Emission Standard for Hazardous Air Pollutants in 40 CFR Part 63 (July 1, 2022) conducted during the same annual period to satisfy the annual combustion process adjustment requirement of this Section I.D.5.e.(iv)(D) for that 12-month period.
- I.D.5.f. Recordkeeping. The following records must be kept for a period of five years and made available to the Division upon request.
 - I.D.5.f.(i) Records of performance tests conducted pursuant to Section I.D.5.d, including I.D.5.d.(i)(D)., including the date, engine settings on the date of the test, and documentation of the methods and results of the testing.

- I.D.5.f.(ii) Records of semi-annual portable analyzer monitoring, including the date, engine settings on the date of the monitoring, and documentation of the results of the monitoring. These records must include any demonstration that no semi-annual portable analyzer monitoring was required as provided under Section I.D.5.e.(i)(D) or I.D.5.e.(i)(E), if applicable.
- I.D.5.f.(iii) Records of catalyst monitoring required by Section I.D.5.e.(ii) and any actions taken to address monitored values outside the temperature or pressure drop parameters, including the date and a description of actions taken.
- I.D.5.f.(iv) If claiming an exemption under Section I.D.5.a.(ii), records demonstrating that fuel combustion was less than 100 MMBtu per year or hours of operation are less than 250 hours per year.
- I.D.5.f.(v) Hours of operation as recorded by the hour meter or alternative device approved by the Division continuously tracking hours as required by Section I.D.5.e.(iii), at least on a calendar month basis.
- I.D.5.f.(vi) Records of tuning, adjustments, or other combustion process adjustments required under Section I.D.5.e.(iv), including:
 - I.D.5.f.(vi)(A) The date of the adjustment.
 - I.D.5.f.(vi)(B) A description of any corrective action taken.
 - I.D.5.f.(vi)(C) If the owner or operator conducts the combustion process adjustment according to the manufacturer recommended procedures and schedule and the manufacturer specifies a combustion process adjustment on an operation time schedule, the hours of operation since the last combustion process adjustment and the procedures followed. The owner or operator must retain documentation of any relied upon manufacturer recommended procedures, specifications, and maintenance schedule for five years after the owner or operator ceases to rely upon it.
 - I.D.5.f.(vi)(D) If the owner or operator conducts the combustion process adjustment according to a New Source Performance Standard or National Emission Standard for Hazardous Air Pollutants, what standard applied and what procedures were followed.
- I.D.5.g. Reporting. Beginning on the date specified and by May 1 of each year thereafter, the owner or operator of each engine subject to this Section I.D.5. must submit the following information covering the preceding calendar year:
 - I.D.5.g.(i) Beginning May 1, 2021, a statement of the status of performance testing required under Section I.D.5.d, and the date and results of that testing;

- II.D.5.g.(ii) Beginning May 1, 2022, an identification of any engines placed in service, modified, relocated, or replaced, including AIRS number, serial number, location, engine configuration, and a certification as to whether the emission standards in Table 2 are met;
 - I.D.5.g.(iii) Beginning May 1, 2023, the date on which the monitoring required by Sections I.D.5.e.(iv) was performed;
 - I.D.5.g.(iv) Beginning May 1, 2023, the date that all required semi-annual portable analyzer testing was performed under Section I.D.5.e.(i), and the results of that testing.
- I.D.6. (State Only) Additional Requirements for Internal Combustion Engines
- I.D.6.a. Applicability
- I.D.6.a.(i) Sections I.D.6.a. through I.D.6.f.(i) apply to stationary rich burn natural gas fired reciprocating internal combustion engines state-wide with a manufacturer's design rate greater than or equal to 100 horsepower but less than 1000 horsepower and lean burn natural gas fired reciprocating internal combustion engines state-wide with a manufacturer's design rate greater than or equal to 250 horsepower but less than 1000 horsepower.
 - I.D.6.a.(ii) Sections I.D.6. through I.D.6.f.(i) apply to stationary diesel or dual-fuel fired internal combustion engines state-wide with a manufacturer's design rate greater than or equal to 500 horsepower.
 - I.D.6.a.(iii) For purposes of this Section I.D.6., modified means any physical change to the engine or change in method of operation that results in an increase in the emission rate of any air pollutant, and does not include any physical or operational changes excluded by 40 C.F.R. 60.14(e).
 - I.D.6.a.(iv) For purposes of this Section I.D.6., placed in service means the bringing of an engine on-site for use. The placed in service date is the date the engine begins to operate. For engines in service on or before January 30, 2024, replacement under an authorized alternative operating scenario, or a one-time only replacement of an engine that cannot achieve an applicable emission standard due to technical or economic infeasibility, is not considered placed in service.
 - I.D.6.a.(v) For purposes of this Section I.D.6., relocated means (1) the bringing of an engine into the 8-hour ozone control area or Northern Weld County from outside the 8-hour ozone control area or Northern Weld County, or (2) the bringing of an engine into the State of Colorado from outside the State of Colorado. The relocation date is the date the subject engine begins to operate.
 - I.D.6.a.(vi) Exemptions.

- I.D.6.a.(vi)(A) Engines that burn less than 100 MMBtu per year of natural gas or diesel fuel on a rolling-12-month basis are not subject to Sections I.D.6.a. through I.D.6.d, or I.D.6.f.
- I.D.6.a.(vi)(B) Non-road engines, as defined in Regulation Number 3, Part A, Section I.B.36 are not subject to this Section I.D.6.
- I.D.6.a.(vi)(C) Any emergency power generator exempt from APEN or construction permit requirements pursuant to Regulation Number 3, Parts A or B are not subject to this Section I.D.6.
- I.D.6.a.(vi)(D) Emergency power generators or engines that are used to meet electrical demand or provide voltage support to the electrical grid that operate less than 250 hours per year on a rolling-12-month basis are not subject to Sections I.D.6.a. through I.D.6.d, or I.D.6.f.

I.D.6.b. Emission Standards for Engines Subject to Section I.D.6.a.

- I.D.6.b.(i) The owner or operator of any stationary natural gas-fired reciprocating internal combustion engine that is placed in service, modified, or relocated after January 30, 2024, must comply with the emission standards in Table 5 upon placement in service, modification, or relocation.
- I.D.6.b.(ii) The owner or operator of any stationary natural gas-fired reciprocating internal combustion engine not subject to Section I.D.6.b.(i) must comply with the emission standards in Table 5 in accordance with the timing set forth Section I.D.6.b.(vii).

TABLE 5	
Engine Type	Emission Standards
	NOx (g/hp-hr)
Lean Burn engines in service on or before January 30, 2024	0.8
Lean Burn <u>engines placed in service, modified, or relocated after January 30, 2024</u>	0.5
Rich Burn <u>engines</u>	0.5

- I.D.6.b.(iii) The owner or operator of any stationary diesel or dual-fuel internal combustion engine that is placed in service, modified, or relocated after January 30, 2024, must achieve or exceed EPA Tier IV standards for NOx upon placement in service, modification, or relocation.

- I.D.6.b.(iv) The owner or operator of any stationary diesel or dual-fuel internal combustion engine not subject to Section I.D.6.b.(iii) must achieve or exceed EPA Tier IV standards for NO_x in accordance with the timing set forth Section I.D.6.b.(vii).
- I.D.6.b.(v) The owner or operator of any engine that meets all of the criteria described in Sections I.D.6.b.(v)(A) through (E) may submit a request to the Division for an alternative emission standard for a specific engine based on technical or economic infeasibility. To qualify for an alternative emission standard, an owner or operator must submit to the Division a reasonable demonstration detailing why it is not technically or economically feasible for the individual engine to achieve the emission standard in Section I.D.6.b.(ii) by January 30, 2025. Within a reasonable amount of time after receipt, the Division will grant an alternative emission standard where the Division determines a satisfactory source-specific demonstration has been made. The Division will set an appropriate alternative emission standard considering control technology that will achieve the maximum degree of emission control that a particular source is capable of meeting and that is reasonably available considering technological and economic feasibility. Any granted alternative emission standard will be included in the applicable permit pursuant to Section I.D.6.b.(vi)
- I.D.6.b.(v)(A) Stationary natural gas-fired lean burn reciprocating internal combustion engine;
- I.D.6.b.(v)(B) Located outside northern Weld County and the 8-Hour Ozone Control Area;
- I.D.6.b.(v)(C) Placed in service on or before January 30, 2024;
- I.D.6.b.(v)(D) With greater than or equal to 400 horsepower; and
- I.D.6.b.(v)(E) With a NO_x emission factor of less than or equal to 3.0 g/hp-hr as reflected by the APEN on file as of January 30, 2024.
- I.D.6.b.(vi) Permit Modification.
- I.D.6.b.(vi)(A) An engine in service on or before January 30, 2024, that requires only a modification of an existing permit to meet the emission standards in this Section I.D.6.b. must submit a complete permit application containing the necessary limitations by the following deadlines.
- I.D.6.b.(vi)(A)(1) For individual construction permit or Title V operating permit significant modification applications, by no later than May 1, 2024.
- I.D.6.b.(vi)(A)(2) For general construction permit or Title V operating permit minor modification applications, by no later than January 30, 2025.

I.D.6.b.(vi)(B) For any engine in service on or before January 30, 2024, and not subject to Section I.D.6.b.(vi)(A), owners and operators must modify existing permits to reflect the emission standards or other operating conditions necessary to achieve compliance with Table 5. Complete permit applications must be submitted to the Division by the following deadlines:

I.D.6.b.(vi)(B)(1) For individual construction permit or Title V operating permit modifications applications, at least 365 days prior to the date established in Section I.D.6.(vii) for that engine; and

I.D.6.b.(vi)(B)(2) For general construction permit modification applications, at least 90 days prior to the date established in Section I.D.6.b.(vii) for that engine.

I.D.6.b.(vii) Compliance deadlines for engines subject to Sections I.D.6.b.(ii) or I.D.6.b.(iv).

I.D.6.b.(vii)(A) Engines that comply with the emission standards on or before January 30, 2024, or are subject to Section I.D.6.b.(vi)(A) must meet the emission standards in Table 5 by May 1, 2025. If an owner or operator has submitted a complete application in compliance with Section I.D.6.b.(vi)(A) and has not been issued the relevant permit by May 1, 2025, the Division may extend the compliance deadline for an engine as necessary to align with issuance date of the permit.

I.D.6.b.(vii)(B) Engines not subject to Section I.D.6.b.(vi)(A) must meet the emission standards in Table 5 in accordance with the timing set forth in Table 6. If an owner or operator has submitted a complete application requesting the emission standards or other operating conditions necessary to achieve compliance with Table 5 and has not been issued the relevant permit by the applicable compliance deadline in Table 6, the Division may extend the compliance deadline for an engine as necessary to align with issuance date of the permit.

TABLE 6					
Location of Subject Engines by Owner or Operator	Compliance Deadlines				
	May 1, 2025	May 1, 2026	May 1, 2027	May 1, 2028	May 1, 2029
	Percent (%) of engines that must comply with Table 5 limits				
Natural Gas-Fired Engines Inside, or inside and outside, the 8-Hour Ozone Control Area	At least 34% of engines inside the 8-Hour Ozone Control Area	At least 67% of engines inside the 8-Hour Ozone Control Area; and at least 25% of engines outside the 8-Hour Ozone Control Area	100% of engines in the 8-Hour Ozone Control Area; and at least 50% of engines outside the 8-Hour Ozone Control Area	At least 75% of engines outside the 8-Hour Ozone Control Area	100% of all engines
Natural Gas-Fired Engines Outside the 8-Hour Ozone Control Area only	At least 20%	At least 40%	At least 60%	At least 80%	100%
Diesel and Dual Fuel Engines State-wide			At least 50%		100%

- I.D.6.b.(viii) If an owner or operator replaces an engine subject to an emission standard under this Section I.D.6.b. with a different stationary engine under an alternative operating scenario pursuant to an existing Division issued permit, the replacement engine must, meet the same emission standard as the engine being replaced.

I.D.6.c. Performance Testing

- I.D.6.c.(i) Engines subject to this Section I.D.6. must conduct a performance test consistent with the following requirements.
- I.D.6.c.(i)(A) The owner or operator of an engine subject to Section I.D.6.b.(ii) must conduct a performance test for NOx by May 1, 2025 or within 6 months of any Division established compliance deadline pursuant to Section I.D.6.b.(vii).
- I.D.6.c.(i)(B) The owner or operator of an engine placed in service, modified, relocated or replaced after January 30, 2024, must conduct a performance test within 12 months of the date the engine is placed in service, modified, relocated or replaced.
- I.D.6.c.(i)(C) The following engines are exempt from the requirements of this Section I.D.6.c.

- I.D.6.c.(i)(C)(1) Engines subject to the performance testing requirements of 40 C.F.R. Part 60, Subpart JJJJ (July 1, 2023) or 40 C.F.R. Part 60, Subpart IIII (July 1, 2023).
- I.D.6.c.(i)(C)(2) Engines subject to at least semi-annual portable analyzer testing or ongoing performance testing in a permit issued on or before January 30, 2024.
- I.D.6.c.(i)(D) A performance test conducted in accordance with 40 C.F.R. §60.4244 (July 1, 2023) or 40 C.F.R. §60.4212 or 60.4213 (July 1, 2023) between January 1, 2023 and May 1, 2025, will satisfy the initial performance testing requirements in Section I.D.6.c.(i)(A).
- I.D.6.c.(ii) Performance tests must be conducted in accordance with the applicable reference test methods of 40 C.F.R. Part 60, Appendix A (July 1, 2023), and a test protocol submitted to the Division for review at least thirty (30) days prior to testing and in accordance with AQCC Common Provisions Regulation Section II.C.
- I.D.6.c.(iii) Tuning of an engine prior to the performance test required by this Section I.D.6.c. is not a violation of this rule. However, readjustment of an engine set point following the performance test that would negatively impact the performance of the engine (i.e., result in increased emissions above applicable permit limits) is a violation of this rule.
- I.D.6.c.(iv) Diesel engines covered by Section I.D.6.b.(iii) or (iv) that are certified by the manufacturer as Tier IV engines do not require the initial performance test under Section I.D.6.c.(i)(B), but must conduct annual performance testing beginning five years after the engine is placed in service.
- I.D.6.d. Monitoring. Except as provided in Section I.D.6.a.(vi), owners or operators of an engine subject to Section I.D.6.a. must:
 - I.D.6.d.(i) Beginning on May 1, 2025 or within 6 months of any Division established compliance deadline pursuant to Section I.D.6.b.(vii), conduct annual portable analyzer monitoring for NOx. At least six calendar months must separate the annual tests.
 - I.D.6.d.(i)(A) If the engine is operated for less than 200 hours in any 12-month period, then the portable analyzer monitoring need not occur during that annual period (i.e., the engine does not need to be started for the sole purpose of portable monitoring).
 - I.D.6.d.(i)(B) All portable analyzer testing required by this section must be conducted using the Division's Portable Analyzer Monitoring Protocol (version: March 2006).

- I.D.6.d.(i)(C) Tuning of an engine prior to annual monitoring events required by this Section I.D.6.d.(i) is not a violation of this rule. However, readjustment of an engine set point following the monitoring event that would negatively impact the performance (i.e., result in increased emissions above applicable permit limits) of the engine is a violation of this rule.
- I.D.6.d.(i)(D) A performance test conducted pursuant to Section I.D.6.c., 40 C.F.R. Part 60, JJJJ, IIII, or a permit requirement may take the place of the next required annual portable analyzer test required by this section.
- I.D.6.d.(i)(E) An engine subject to at least annual portable analyzer testing requirements in an existing permit issued by the Division can comply with this Section I.D.6.d.(i) by complying with the testing requirements in the permit.
- I.D.6.d.(ii) For natural gas-fired engines, beginning May 1, 2024, if a catalyst is used to reduce emissions:
 - I.D.6.d.(ii)(A) Monitor the inlet temperature to the catalyst weekly and conduct maintenance if the temperature is not within applicable limits.
 - I.D.6.d.(ii)(B) Measure the pressure drop across the catalyst monthly and conduct maintenance if the pressure drop is greater than 2.0 inches of water outside the baseline value established after each annual portable analyzer monitoring.
 - I.D.6.d.(ii)(C) Engines that are subject to catalyst temperatures and catalyst pressure drop monitoring requirements in an existing permit issued by the Division or 40 C.F.R. Part 63, Subpart ZZZZ (July 1, 2023) satisfy the monitoring requirements of this Section I.D.6.d.(ii).
- I.D.6.d.(iii) Conduct the following inspections and adjustments at least annually, unless otherwise specified, beginning in 2025.
 - I.D.6.d.(iii)(A) Change oil and filters as necessary; and,
 - I.D.6.d.(iii)(B) Inspect air cleaners, fuel filters, hoses, and belts and clean or replace as necessary; and,
 - I.D.6.d.(iii)(C) Inspect spark plugs and replace as necessary; or,

- I.D.6.d.(iii)(D) Conduct a combustion process adjustment according to the manufacturer recommended procedures and schedule. Alternatively, the owner or operator may rely on a combustion process adjustment conducted in accordance with requirements and schedules of a New Source Performance Standard in 40 CFR Part 60 (July 1, 2023) or National Emission Standard for Hazardous Air Pollutants in 40 CFR Part 63 (July 1, 2023) conducted during the same annual period to satisfy the annual combustion process adjustment requirement of this Section I.D.6.d.(iv)(D) for that 12-month period.

I.D.6.e. Recordkeeping. The following records must be kept for a period of five years and made available to the Division upon request.

- I.D.6.e.(i) Records of performance tests conducted pursuant to Section I.D.6.c., including I.D.6.c.(i)(D), including the date, engine settings on the date of the test, and documentation of the methods and results of the testing.
- I.D.6.e.(ii) Records of annual portable analyzer monitoring, including the date, engine settings on the date of the monitoring, and documentation of the results of the monitoring. These records must include any demonstration that no annual portable analyzer monitoring was required as provided under Sections I.D.6.d.(i)(D) or I.D.6.d.(i)(E), if applicable.
- I.D.6.e.(iii) For natural gas-fire engines, records of catalyst monitoring required by Section I.D.6.d.(ii) and any actions taken to address monitored values outside the temperature or pressure drop parameters, including the date and a description of actions taken.
- I.D.6.e.(iv) If claiming an exemption under Section I.D.6.a.(vi), records demonstrating that fuel combustion was less than 100 MMBtu per year or hours of operation are less than 250 hours per year.
- I.D.6.e.(v) Hours of operation at least on a calendar month basis.
- I.D.6.e.(vi) Records of tuning, adjustments, or other combustion process adjustments required under Section I.D.6.d.(iii), including:
 - I.D.6.e.(vi)(A) The date of the adjustment.
 - I.D.6.e.(vi)(B) A description of any corrective action taken.

I.D.6.e.(vi)(C) If the owner or operator conducts the combustion process adjustment according to the manufacturer recommended procedures and schedule and the manufacturer specifies a combustion process adjustment on an operation time schedule, the hours of operation since the last combustion process adjustment and the procedures followed. The owner or operator must retain documentation of any relied upon manufacturer recommended procedures, specifications, and maintenance schedule for five years after the owner or operator ceases to rely upon it.

I.D.6.e.(vi)(D) If the owner or operator conducts the combustion process adjustment according to a New Source Performance Standard or National Emission Standard for Hazardous Air Pollutants, what standard applied and what procedures were followed.

I.D.6.f. Reporting.

I.D.6.f.(i) Beginning on the date specified and by May 1 of each year thereafter, the owner or operator of each engine subject to this Section I.D.6. must submit the following information covering the preceding calendar year.

I.D.6.f.(i)(A) Beginning May 1, 2024, a statement of the status of performance testing required under Section I.D.6.c., and the date and results of that testing (i.e., pass or fail).

I.D.6.f.(i)(B) Beginning May 1, 2025, an identification of any engines placed in service, modified, relocated, or replaced, including AIRS number, serial number, location, engine configuration, and a certification as to whether the emission standards in Table 5 are met.

I.D.6.f.(i)(C) Beginning May 1, 2026, the date on which the monitoring required by Sections I.D.6.d.(iii) was performed.

I.D.6.f.(i)(D) Beginning May 1, 2026, the date that all required annual portable analyzer testing was performed under Section I.D.6.d.(i), and the results of that testing (i.e., pass or fail).

II. Control of Emissions from Stationary and Portable Combustion Equipment in the 8-Hour Ozone Control Area or Northern Weld County

II.A. Requirements for major sources of NOx

II.A.1. Applicability.

- II.A.1.a. Except as provided in Section II.A.2., the requirements of this Section II. apply to owners and operators of any stationary combustion equipment that existed at a major source of NOx (greater than or equal to 100 tpy NOx) as of June 3, 2016, located in the 8-Hour Ozone Control Area.
- II.A.1.b. Except as provided in Section II.A.2., the requirements of Section II. apply to owners and operators of any stationary combustion equipment that existed at a major source of NOx (greater than or equal to 50 tpy NOx) as of January 27, 2020, located in the 8-Hour Ozone Control Area, that is not already subject as provided under Section II.A.1.a.
- II.A.1.c. Except as provided in Section II.A.2., the requirements of Section II. apply to owners and operators of process heaters that existed at source that emits, or has the potential to emit, NOx emissions greater than or equal to 25 tpy NOx as of July 20, 2021, located in the 8-Hour Ozone Control Area, that is not already subject as provided under Sections II.A.1.a. or II.A.1.b.
- II.A.1.d. Except as provided in Section II.A.2., the requirements of Section II. apply to owners and operators of any stationary combustion equipment that existed at a major source of NOx (greater than or equal to 25 tpy NOx) as of November 7, 2022, located in the 8-Hour Ozone Control Area, that is not already subject as provided under Sections II.A.1.a. through II.A.1.c.
- II.A.1.e. Except as provided in Sections II.A.2. or III.C., the requirements of Section II. apply to owners and operators of any stationary combustion equipment that existed at a major source of NOx (greater than or equal to 100 tpy NOx) as of November 7, 2022, located in northern Weld County.
- II.A.2. Exemptions. The following stationary combustion equipment are exempt from the emission limitation requirements of Section II.A.4., the compliance demonstration requirements in Section II.A.5., and the related recordkeeping and reporting requirements of Sections II.A.7.a-e. and II.A.8, but these sources must maintain any and all records necessary to demonstrate that an exemption applies. These records must be maintained for a minimum of five years and made available to the Division upon request. Qualifying for an exemption in this section does not preclude the combustion process adjustment requirements of Section II.A.6., when required by II.A.6.a.

Once stationary combustion equipment no longer qualifies for any exemption, the owner or operator must comply with the applicable requirements of this Section II.A. as expeditiously as practicable but no later than 36 months after any exemption no longer applies. Additionally, once stationary combustion equipment that is not equipped with CEMS or CERMS no longer qualifies for any exemption, the owner or operator must conduct a performance test using EPA test methods within 180 days and notify the Division of the results and whether emission controls will be required to comply with the emission limitations of Section II.A.4.

II.A.2.a. Any stationary combustion equipment whose utilization is less than:

- | | |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| II.A.2.a.(i) | 20% of its capacity factor on an annual average basis over a 3-year rolling period for boilers; or |
| II.A.2.a.(ii) | 10% of its capacity factor on an annual average basis over a 3-year rolling period for stationary combustion turbines and compression ignition reciprocating internal combustion engines. |

- II.A.2.b. An engine testing operation or process line.
- II.A.2.c. Any gaseous fuel fired stationary combustion equipment used to control VOC emissions from a commercial or industrial process.
- II.A.2.d. Any stationary combustion equipment with total uncontrolled actual emissions less than 5 tpy NOx on a calendar year basis.
- II.A.2.e. Any natural gas-fired reciprocating internal combustion engines subject to a work practice or emission control requirement contained in this Regulation Number 26, Part B, Section I.A. or I.B.
- II.A.2.f. Any stationary combustion equipment subject to a federally enforceable work practice or emission control requirement contained in this Regulation Number 26, Part B, Sections III.A. through III.C. or Regulation 23.

II.A.3. Definitions

- II.A.3.a. "Affected unit" means any stationary combustion equipment that is subject to or becomes subject to an emission limitation in Section II.A.4.
- II.A.3.b. "Boiler" means an enclosed device using controlled flame combustion and having the primary purpose of recovering thermal energy in the form of steam or hot water.
- II.A.3.c. "Capacity factor" means the ratio of the amount of fuel burned by an emissions unit in a calendar year to the amount of fuel it could have burned if it had operated at the designed heat input rating for 8,760 hours during the calendar year. Alternatively, for electric generating units, capacity factor can mean the ratio of the unit's actual annual electric output (expressed in MWe/hr) to the electric output the unit could have achieved if it operated at its nameplate capacity (or maximum observed hourly gross load (expressed in MWe/hr) if greater than the nameplate capacity) for 8,760 hours during the calendar year.
- II.A.3.d. "Ceramic kiln" means equipment used for the curing or firing of ceramic products or glaze on ceramic products. A kiln may operate continuously or by batch process.
- II.A.3.e. "Continuous emission monitoring system" ("CEMS") or "Continuous emission rate monitoring system" ("CERMS") means the total equipment required to sample, condition (if applicable), analyze, and provide a written record of such emissions and/or emission rates, expressed on a continuous basis in terms of an applicable emission limitation. Such equipment includes, but is not limited to, sample collection and calibration interfaces, pollutant analyzers, a diluent analyzer (oxygen or carbon dioxide), stack gas volumetric flow monitors (if appropriate for CERMS), and data recording and storage devices.
- II.A.3.f. "Compression ignition reciprocating internal combustion engine (RICE)" means a type of stationary RICE that is liquid fuel-fired and not ignited with a spark plug or other sparking device.

- II.A.3.g. "Digester gas" means any gaseous byproduct of wastewater treatment typically formed through the anaerobic decomposition of organic waste materials and composed principally of methane and carbon dioxide.
- II.A.3.h. "Duct burner" means a device that combusts fuel and is placed in the exhaust duct from another source (e.g., stationary combustion turbine, internal combustion engine, or kiln) to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a heat recovery steam generating unit.
- II.A.3.i. "Dryer" means a device that is used to reduce or evaporate moisture content or remove organic contaminants.
- II.A.3.j. "Furnace" means an enclosed device that is an integral component of a manufacturing process and that uses thermal treatment to accomplish recovery of materials or energy.
- II.A.3.k. "Gaseous fuel" means natural gas, landfill gas, refinery fuel gas, digester gas, methane, ethane, propane, butane, or any gas stored as a liquid at high pressure such as liquefied petroleum gas.
- II.A.3.l. "Glass melting furnace" means an emissions unit comprising a refractory vessel in which raw materials are charged, melted at high temperature, refined, and conditioned to produce molten glass.
- II.A.3.m. "Kiln" means the equipment used to remove combined (chemically bound) water and/or gases from mineral material through direct or indirect heating.
- II.A.3.n. "Lightweight aggregate" means the expanded, porous product from heating shales, clays, slates, slags, or other natural materials in a kiln.
- II.A.3.o. "Liquid fuel" means any fuel which is a liquid at standard conditions including but not limited to distillate oils, kerosene and jet fuel. Liquefied gaseous fuels are not liquid fuels.
- II.A.3.p. "Process heater" means an enclosed device using controlled flame and a primary purpose to transfer heat indirectly to a process material or to a heat transfer material for use in a process unit, instead of generating steam. Process heaters are devices in which the combustion gases do not come into direct contact with process materials.
- II.A.3.q. "Reciprocating internal combustion engine" means any reciprocating internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work and which is not used to propel a motor vehicle or a vehicle used solely for competition.
- II.A.3.r. "Stationary combustion equipment" means an emissions unit that combusts solid, liquid, or gaseous fuel, generally for the purposes of producing electricity, generating steam, or providing useful heat or energy for industrial, commercial, or institutional use. Stationary combustion equipment includes, but is not limited to, boilers, duct burners, engines, glass melting furnaces, kilns, process heaters, stationary combustion turbines, dryers, furnaces, and ceramic kilns.

- II.A.3.s. "Stationary combustion turbine" means a non-mobile, enclosed fossil or other fuel-fired device that is comprised of a compressor, a combustor and a turbine, and in which the flue gas resulting from the combustion of fuel in the combustor passes through the turbine, rotating the turbine. Stationary combustion turbines can be simple cycle or combined cycle and they may or may not include a duct burner.

II.A.4. Emission limitations.

By October 1, 2021, or the applicable date in Section II.A.4.g. for process heaters, no owner or operator of stationary combustion equipment specified in Section II.A.1.a. may cause, allow, or permit NO_x to be emitted in excess of the following emission limitations. When demonstrating compliance using continuous emissions monitoring pursuant to Section II.A.5.b.(i), the following emission limitations are on a 30-day rolling average basis, unless otherwise specified.

By July 20, 2021, or the applicable date in Section II.A.4.g. for process heaters, no owner or operator of stationary combustion equipment specified in Section II.A.1.b. may cause, allow, or permit NO_x to be emitted in excess of the following emission limitations. When demonstrating compliance using continuous emissions monitoring pursuant to Section II.A.5.b.(i), the following emission limitations are on a 30-day rolling average basis, unless otherwise specified.

By May 1, 2022, or May 1 2023, as specified in Section II.A.4.g., no owner or operator of process heaters specified in Section II.A.1.c. may cause, allow, or permit NO_x to be emitted in excess of the following emission limitations. Compliance with the applicable emission limitations contained in Section II.A.4. must be determined according to the applicable methods contained in Sections II.A.5. When demonstrating compliance using continuous emissions monitoring pursuant to Section II.A.5.b.(i), the following emission limitations are on a 30-day rolling average basis, unless otherwise specified.

By May 1, 2024, or the applicable date in Section II.A.4.g. for process heaters, no owner or operator of stationary combustion equipment specified in Sections II.A.1.d. or II.A.1.e. may cause, allow, or permit NO_x to be emitted in excess of the following emission limitations. When demonstrating compliance using continuous emissions monitoring pursuant to Section II.A.5.b.(i), the following emission limitations are on a 30-day rolling average basis, unless otherwise specified.

II.A.4.a. Boilers.

- II.A.4.a.(i) For a gaseous fuel-fired boiler with a maximum design heat input capacity equal to or greater than 100 MMBtu/hr, 0.2 lb/MMBtu of heat input or less than 165 parts per million dry volume corrected to 3% oxygen.
- II.A.4.a.(ii) For a liquid fuel-fired boiler with a maximum design heat input capacity equal to or greater than 100 MMBtu/hr, 0.2 lb/MMBtu of heat input or less than 165 parts per million dry volume corrected to 3% oxygen.
- II.A.4.a.(iii) For a liquid or gaseous fuel-fired boiler at a major source of NO_x (greater than or equal to 50 tpy NO_x as of January 27, 2020) with a maximum design heat input capacity equal to or greater than 100 MMBtu/hr, 0.2 lb/MMBtu of heat input or less than 165 parts per million dry volume corrected to 3% oxygen.

- II.A.4.a.(iv) For a liquid or gaseous fuel-fired boiler at a major source of NO_x (greater than or equal to 50 tpy NO_x as of January 27, 2020) with a maximum design heat input capacity equal to or greater than 50 MMBtu/hr but less than 100 MMBtu/hr, 0.1 lb/MMBtu of heat input or less than 83 parts per million dry volume corrected to 3% oxygen.
- II.A.4.a.(v) For a liquid or gaseous fuel-fired boiler at a major source of NO_x (greater than or equal to 25 tpy NO_x as of November 7, 2022) with a maximum design heat input capacity equal to or greater than 20 MMBtu/hr but less than 100 MMBtu/hr, 0.1 lb/MMBtu of heat input or less than 83 parts per million dry volume corrected to 3% oxygen.
- II.A.4.a.(vi) For wood-fired boilers at a major source of NO_x (greater than or equal to 25 tpy NO_x as of November 7, 2022) with a maximum design heat input capacity equal to or greater than 20 MMBtu/hr but less than 50 MMBtu/hr, 0.49 lb/MMBtu of heat input.
- II.A.4.a.(vii) Boilers subject to the categorical limits in Section II.A.4.a.(i) through (vi) or boilers with a maximum design heat input capacity less than 100 MMBtu/hr must comply with the combustion process adjustment requirements contained in Section II.A.6. while burning wood, gaseous fuel, liquid fuel, or any combination thereof, when required by Section II.A.6.a.

II.A.4.b. Stationary combustion turbines.

- II.A.4.b.(i) Stationary combustion turbines with a maximum design heat input capacity equal to or greater than 10 MMBtu/hr and which commenced construction on or before February 18, 2005 must comply with the following NO_x emission limits in Table 1.

Table 1 – NOx limits for stationary combustion turbines constructed on or before February 18, 2005		
Combustion turbine type	Combustion turbine heat input at peak load (HHV)	NOx emission standard
Turbine firing natural gas	> 850 MMBtu/h	15 ppm at 15 percent O ₂ or 54 ng/J of useful output (0.43 lb/MWh)
Turbine firing fuels other than natural gas	> 850 MMBtu/h	42 ppm at 15 percent O ₂ or 160 ng/J of useful output (1.3 lb/MWh).
Turbine	≤ 50 MMBtu/h	150 ppm at 15 percent O ₂ or 1,100 ng/J of useful output (8.7 lb/MWh).
Turbine firing natural gas	> 50 MMBtu/h and ≤ 850 MMBtu/h	42 ppm at 15 percent O ₂ or 250 ng/J of useful output (2.0 lb/MWh).
Turbine firing fuels other than natural gas	> 50 MMBtu/h and ≤ 850 MMBtu/h	96 ppm at 15 percent O ₂ or 590 ng/J of useful output (4.7 lb/MWh).
Turbines operating at less than 75 percent of peak load, turbines operating at temperatures less than 0 °F	≤ 30 MW output	150 ppm at 15 percent O ₂ or 1,100 ng/J of useful output (8.7 lb/MWh).
Turbines operating at less than 75 percent of peak load, turbines operating at temperatures less than 0 °F	> 30 MW output	96 ppm at 15 percent O ₂ or 590 ng/J of useful output (4.7 lb/MWh).
Heat recovery units operating independent of the combustion turbine	All sizes	54 ppm at 15 percent O ₂ or 110 ng/J of useful output (0.86 lb/MWh).

- II.A.4.b.(i)(A) For units with heat recovery and CEMS, determine compliance on a 30-day rolling average.
- II.A.4.b.(i)(B) For simple cycle turbines with CEMS, determine compliance on a 4-hour rolling average.
- II.A.4.b.(i)(C) For operating periods during which multiple emissions standards apply, the applicable standard is the average of the applicable standards during each hour. For hours with multiple emissions standards, the applicable limit for that hour is determined based on the condition that corresponded to the highest emissions standard.
- II.A.4.b.(i)(D) Emissions exceeding the NOx emission limits in Section II.A.4.b.(i) at any time, including during times of startup, shutdown, malfunction, fuel switching, tuning, and testing must be reported as specified in Section II.A.8.a.(i).

- II.A.4.b.(ii) Stationary combustion turbines with a maximum design heat input capacity equal to or greater than 10 MMBtu/hr and which commenced construction, modification or reconstruction after February 18, 2005 must comply with the applicable NO_x emission limits in 40 CFR Part 60, Subpart KKKK (October 7, 2020).
- II.A.4.b.(iii) Stationary combustion turbines subject to the categorical limits in Section II.A.4.b.(i) or (ii) and stationary combustion turbines with a maximum design heat input capacity less than 10 MMBtu/hr must comply with the combustion process adjustment requirements contained in Section II.A.6. while burning gaseous fuel, liquid fuel, or any combination thereof, when required by Section II.A.6.a.
- II.A.4.b.(iv) Stationary combustion turbines, air pollution control equipment, and monitoring equipment must be operated in a manner consistent with good air pollution control practices for minimizing emissions at all times.

II.A.4.c. Lightweight aggregate kilns.

- II.A.4.c.(i) For lightweight aggregate kilns with a maximum design heat input capacity equal to or greater than 50 MMBtu/hr, 56.6 pounds of NO_x per hour.

II.A.4.d. Glass melting furnaces, beginning May 1, 2023.

- II.A.4.d.(i) 1.2 pounds of NO_x per ton of glass pulled, on a 30-production-day rolling average. A calendar day in which no glass is pulled from the furnace is not a furnace production day. The 30-day rolling average is the sum of all valid hourly NO_x mass emissions recorded by the CEMS or CERMs during the 30-day period divided by the sum of the glass pulled in the same period. When glass is being pulled, NO_x emissions must be measured continuously in accordance with the applicable monitoring requirements of Section II.A.5.
- II.A.4.d.(ii) For periods of time when no glass is pulled, NO_x mass emissions must be calculated as follows and included in the annual mass emissions totals for the furnace.
 - II.A.4.d.(ii)(A) During initial heating of a furnace using portable burners following the original construction or refractory brick replacement or repair project, the portable burner fuel limit is 8 million standard cubic feet of natural gas. The NO_x emissions resulting from the use of portable burners must be calculated using the total quantity of gas combusted by the portable burners and the uncontrolled NO_x emission factor for the burner heat input design found in Table 1.4-1 of AP42.

II.A.4.d.(ii)(B) When no glass is being pulled and the furnace burners are combusting fuel, NO_x emissions must be measured continuously in accordance with the applicable monitoring requirements of Section II.A.5.

II.A.4.d.(iii) At all times, the furnace must be operated in accordance with good air pollution control practices.

II.A.4.e. Compression ignition RICE.

II.A.4.e.(i) For a compression ignition RICE with a maximum design power output equal to or greater than 500 horsepower, 9 grams per brake horsepower-hour.

II.A.4.e.(ii) For compression ignition RICE subject to Sections II.A.1.d. or II.A.1.e., the more stringent of either Section II.A.4.e.(i) or applicable emission limits of a New Source Performance Standard in 40 CFR Part 60 (July 1, 2022).

II.A.4.e.(iii) Compression ignition RICE subject to the emission limit in Section II.A.4.e.(i) and compression ignition RICE with a maximum design power output less than 500 horsepower must comply with the combustion process adjustment requirements contained in Section II.A.6.

II.A.4.f. Landfill gas or biogas gas fired RICE.

II.A.4.f.(i) For landfill gas or biogas fired RICE with a maximum design power output equal to or greater than 500 horsepower, 1.5 grams per brake horsepower-hour.

II.A.4.g. Process heaters

II.A.4.g.(i) Except as specified in Section II.A.4.g.(ii), by May 1, 2022, process heaters must comply with the following NO_x emission limits in Table 2.

Table 2 – NO _x limits for process heaters		
Heat input rate (MMBtu/hr)	Fuel type	NO _x emission limit (lb/MMBtu)
≥ 5 and < 100	Natural gas	0.05

II.A.4.g.(ii) Process heaters that require a permitting action or facility shut-down to comply with the NO_x emission limits in Table 2 must comply by May 31, 2023.

II.A.4.g.(iii) Process heaters subject under Section II.A.1.e. must comply with the NO_x emission limits in Table 2 by May 1, 2024.

II.A.5. Compliance demonstration.

II.A.5.a. Compliance date

- II.A.5.a.(i) By October 1, 2021, for stationary combustion equipment that existed at a major source of NO_x (greater than or equal to 100 tpy NO_x) located in the 8-hour ozone control area as of June 3, 2016, except for process heaters specified in Section II.A.4.g., the owner or operator of an affected unit must determine compliance with the applicable emission limitations contained in Section II.A.4. according to the applicable methods contained in this Section II.A.5.
- II.A.5.a.(ii) By July 20, 2021, for stationary combustion equipment specified in Section II.A.1.b., except for process heaters specified in Section II.A.4.g., the owner or operator of an affected unit must determine compliance with the applicable emission limitations contained in Section II.A.4. according to the applicable methods contained in Sections II.A.5.
- II.A.5.a.(iii) By May 1, 2022, for process heaters specified in Section II.A.4.g.(i). or May 31, 2023, for process heaters specified in Section II.A.4.g.(ii), the owner or operator of an affected unit must determine compliance with the applicable emission limitations contained in Section II.A.4. according to the applicable methods contained in Sections II.A.5.
- II.A.5.a.(iv) By May 1, 2024, for stationary combustion equipment specified in Section II.A.1.d., except for process heaters specified in Section II.A.4.g., the owner or operator of an affected unit must determine compliance with the applicable emission limitations contained in Section II.A.4. according to the applicable methods contained in Sections II.A.5.
- II.A.5.a.(v) By May 1, 2024, for stationary combustion equipment specified in Section II.A.1.e., except for process heaters specified in Section II.A.4.g., the owner or operator of an affected unit must determine compliance with the applicable emission limitations contained in Section II.A.4. according to the applicable methods contained in Sections II.A.5.

II.A.5.b. Emissions monitoring requirements for major source RACT limits

- II.A.5.b.(i) Continuous emission monitoring

II.A.5.b.(i)(A) Owners or operators of an affected unit subject to a NO_x emission limit in Sections II.A.4.a.(i) through II.A.4.a.(iii), II.A.4.c., or II.A.4.d. must install, operate and maintain a NO_x CEMS or CERMS to monitor compliance with the applicable emission limit in accordance with this Section II.A.5.b.(i). Owners or operators of affected units' subject to a NO_x emission limit in Sections II.A.4.b., II.A.4.e., or II.A.4.g. may install, operate and maintain a NO_x CEMS or CERMS to monitor compliance with the applicable emission limit in accordance with this Section II.A.5.b.(i) in lieu of performance testing pursuant to Section II.A.5.b.(ii).

II.A.5.b.(i)(A)(1) The owner or operator of an affected unit that is subject to or becomes subject to the monitoring requirements of 40 CFR part 75 and 40 CFR part 75, Appendices A to I (July 19, 2018), must use those monitoring methods and specifications for monitoring NO_x emissions for purposes of this Section II.A.5. and for demonstrating compliance with Section II.A.4. The missing data substitution procedures and bias adjustment requirements of 40 CFR Part 75 (July 19, 2018) do not apply for purposes of demonstrating compliance with Section II.A.4. or this Section II.A.5.

II.A.5.b.(i)(A)(2) For an affected unit equipped with a NO_x CEMS or CERMS for purposes of demonstrating compliance with an applicable subpart of 40 CFR Part 60 (July 1, 2022), the owner or operator must use the definition of operating day, data averaging methodology, and data validation requirements of the applicable subpart of 40 CFR Part 60 for purposes of demonstrating compliance with an applicable emission limit in Section II.A.4. The owner or operator must calibrate, maintain, and operate the CEMS or CERMS and validate emissions data according to the applicable requirements of 40 CFR Part 60, Section 60.13 (July 1, 2022), the performance specifications in 40 CFR Part 60, Appendix B (October 7, 2020), and the quality assurance procedures of 40 CFR Part 60, Appendix F (October 7, 2020).

II.A.5.b.(i)(A)(3) For an affected unit that is not equipped with a NO_x CEMS or CERMS for purposes of demonstrating compliance with 40 CFR Part 60 (July 1, 2022) or Part 75 (July 19, 2018), the owner or operator must install, operate, and maintain a NO_x CEMS or CERMS that measures emissions in terms of the applicable emission limitation and must calibrate, maintain, and operate the CEMS or CERMS and validate emissions data according to the applicable provisions of 40 CFR Part 60, Section 60.13 (July 19, 2018), the performance specifications in 40 CFR Part 60, Appendix B (October 7, 2020), and the quality assurance procedures of 40 CFR Part 60, Appendix F (October 7, 2020). The owner or operator must use the following methodology for purposes of demonstrating compliance with an applicable 30-day rolling average emission limit in Section II.A.4.

II.A.5.b.(i)(A)(3)(a) A unit operating day is a calendar day when any fuel is combusted in the affected unit.

II.A.5.b.(i)(A)(3)(b) 30-day rolling average emission rates must be calculated as the arithmetic average emissions rates determined by the CEMS or CERMS for all hours the affected unit combusted any fuel from the current unit operating day and the prior 29 unit operating days.

II.A.5.b.(i)(A)(4) When an affected unit utilizes a common flue gas stack system with one or more affected units, but no non-affected units, the owner or operator must follow the applicable procedures of 40 CFR Part 75, Appendix F (July 19, 2018) for the determination of all sampling locations and apportionment of emissions to an individual affected unit.

II.A.5.b.(i)(B) Owners or operators of a stationary combustion turbine subject to a NO_x emission limit in Section II.A.4.b. must comply with

II.A.5.b.(i)(B)(1) The applicable monitoring requirements in 40 CFR Part 60, Subpart GG (October 7, 2020) for turbines which commenced construction on or before February 18, 2005.

II.A.5.b.(i)(B)(2) The applicable monitoring requirements in 40 CFR Part 60, Subpart KKKK (October 7, 2020) for turbines which commenced construction after February 18, 2005.

II.A.5.b.(ii) Initial and periodic performance testing

II.A.5.b.(ii)(A) An owner or operator of a stationary combustion turbine subject to 40 CFR Part 60, Subparts GG or KKKK (October 7, 2020) that has used and continues to use performance testing to demonstrate compliance with either Subpart GG or KKKK (October 7, 2020), as applicable, may use those performance testing procedures to demonstrate continued compliance with an applicable limitation contained in Section II.A.4.b., thereby satisfying the requirements of this Section II.A.5.b.(ii).

II.A.5.b.(ii)(B) An owner or operator of a process heater subject to a NO_x emission limit in Section II.A.4.g. must

II.A.5.b.(ii)(B)(1) For natural gas-fired and refinery gas-fired process heaters greater than or equal to 100 MMBtu/hr, conduct an initial performance test in accordance with Sections II.A.5.b.(ii)(D)(1), II.A.5.b.(ii)(D)(4), and II.A.5.b.(ii)(E) by April 1, 2022, or by November 30, 2023, for process heaters specified in Section II.A.4.g.(ii), and conduct subsequent performance tests in accordance with Sections II.A.5.b.(ii)(D)(1), II.A.5.b.(ii)(D)(4), and II.A.5.b.(ii)(E) every 2 years thereafter.

II.A.5.b.(ii)(B)(2) For natural gas-fired process heaters greater than or equal to 50 MMBtu/hr and less than 100 MMBtu/hr, conduct an initial performance test in accordance with Sections II.A.5.b.(ii)(D)(1), II.A.5.b.(ii)(D)(4), and II.A.5.b.(ii)(E) by April 1, 2022, or by November 30, 2023, for process heaters specified in Section II.A.4.g.(ii), and comply with the combustion process adjustment requirements in Section II.A.6. thereafter.

II.A.5.b.(ii)(B)(3) For natural gas-fired process heaters greater than or equal to 5 MMBtu/hr and less than 50 MMBtu/hr and refinery gas-fired process heaters greater than or equal to 5 MMBtu/hr and less than 100 MMBtu/hr, comply with the combustion process adjustment requirements in Section II.A.6.

II.A.5.b.(ii)(B)(4) For a group of process heaters that vent to a common stack, the owner or operator may either assess compliance for the heaters individually by performing a separate emission test of each heater in the duct leading from the heater to the common stack or may perform a single emission test in the common stack. The owner or operator must include in the test protocol for these units a definition of representative conditions for performance testing purposes.

- II.A.5.b.(ii)(B)(5) For natural gas-fired process heaters subject under Sections II.A.1.d. or II.A.1.e. and greater than or equal to 50 MMBtu/hr and less than 100 MMBtu/hr, conduct an initial performance test in accordance with Sections II.A.5.b.(ii)(D)(1), II.A.5.b.(ii)(D)(4), and II.A.5.b.(ii)(E) by April 1, 2024, and comply with the combustion process adjustment requirements in Section II.A.6. thereafter.
- II.A.5.b.(ii)(B)(6) Performance tests conducted in accordance with Sections II.A.5.b.(ii)(D)(1) through II.A.5.b.(ii)(D)(3) and II.A.5.b.(ii)(E) within three (3) years of the applicable performance testing date in Sections II.A.5.b.(ii)(B)(1) or II.A.5.b.(ii)(B)(2) will satisfy the initial performance testing requirement.
- II.A.5.b.(ii)(B)(7) As an alternative to the requirements in Sections II.A.5.b.(ii)(B)(1), II.A.4.b.(ii)(B)(2), II.A.5.b.(ii)(B)(4), and II.A.5.b.(ii)(B)(5), the owner or operator may install, operate, and maintain a NO_x CEMS or CERMS in accordance with Sections II.A.5.b(i)(A)(1) through II.A.5.b.(i)(A)(4) to monitor compliance with the applicable emission limit.
- II.A.5.b.(ii)(C) An owner or operator of a boiler subject to a NO_x limit under Sections II.A.4.a.(v) or II.A.4.a.(vi), conduct an initial performance test in accordance with Sections II.A.5.b.(ii)(D)(1), II.A.5.b.(ii)(D)(4), and II.A.5.b.(ii)(E) by April 1, 2024, and comply with the combustion process adjustment requirements in Section II.A.6. thereafter.
- II.A.5.b.(ii)(D) Except as otherwise provided for in Sections II.A.5.b.(ii)(A), II.A.5.b.(ii)(B), or II.A.5.b.(ii)(C), the owner or operator of an affected unit subject to a NO_x emission limitation contained in Sections II.A.4.a.(iv), II.A.4.b., or II.A.4.e. that is not equipped with NO_x CEMS or CERMS, must conduct an initial performance test and subsequent performance tests every 2 years thereafter, according to the following requirements, as applicable, to determine the affected unit's NO_x emission rate for each fuel fired in the affected unit.
- II.A.5.b.(ii)(D)(1) A performance test is not required for a fuel used only for startup or for a fuel constituting less than 2% of the unit's annual heat input, as determined at the end of each calendar year.

- II.A.5.b.(ii)(D)(2) Initial performance test must include a determination of the capacity load point of the unit's maximum NO_x emissions rate based on one 30-minute test run at each capacity load point for which the unit is operated, other than for startup and shutdown, in the load ranges of 20 to 30%, 45 to 55%, and 70 to 100%. Subsequent performance tests must be performed within the capacity load range determined to result in the maximum NO_x emissions rate.
- II.A.5.b.(ii)(D)(3) Performance tests must determine compliance with Section II.A.4. based on the average of three 60-minute test runs performed at the capacity load determined in Section II.A.5.b.(ii)(D)(2).
- II.A.5.b.(ii)(D)(4) Initial performance test must be conducted at both high and low load capacity. If site operations do not allow testing at high and low loads, the initial performance test must be conducted at the highest achievable load that site conditions allow. The owner or operator must submit a summary of six months of operating performance with the test protocol supporting the testing load(s). Subsequent performance tests must be performed within the capacity load range determined to result in the maximum NO_x emissions rate. Performance tests must determine compliance based on the average of three 60-minute test runs.
- II.A.5.b.(ii)(E) The owner or operator of an affected unit subject to a NO_x emission limitation contained in Section II.A.4.f. that is not equipped with NO_x CEMS or CERMS, must conduct an initial performance test by May 1, 2025, and subsequent performance tests every 3 years thereafter, according to the requirements in Sections II.A.5.b.(ii)(D)(1) through II.A.5.b.(ii)(D)(4), as applicable, to determine the affected unit's NO_x emission rate for each fuel fired in the affected unit. In lieu of subsequent triennial performance tests, the owner or operator may conduct semi-annual portable analyzer monitoring for NO_x conducted using the Division's Portable Analyzer Monitoring Protocol (March 2006). A performance test conducted on the engine in accordance with 40 C.F.R. Part 60 (July 1, 2023) between January 1, 2022, and April 30, 2025, will satisfy the initial performance test requirement.

II.A.5.b.(ii)(F) All performance tests must be conducted in accordance with EPA test methods and a test protocol submitted to the Division for review at least thirty (30) days prior to testing and in accordance with AQCC Common Provisions Regulation Section II.C.

II.A.5.b.(iii) For affected units' subject to a production-based or output based emission limit contained in Section II.A.4. (e.g. lb of NO_x/ton of product), the owner or operator must install, operate, and maintain monitoring equipment for measuring and recording the affected unit's production or output, on an hourly basis, in units consistent with the applicable emission limitation.

II.A.5.b.(iv) Where measuring fuel use is necessary to calculate an emission rate in the units of the applicable standard, fuel flowmeters must be installed, calibrated, maintained, and operated according to manufacturer's instructions for measuring and recording heat input in terms of the applicable emission limitation. Alternatively, fuel flowmeters that meet the installation, certification, and quality assurance requirements of 40 CFR Part 75, Appendix D (July 19, 2018) are acceptable for demonstrating compliance with this section. The installation of fuel-flowmeters is not required where emissions of NO_x in terms of the applicable standard can be calculated in accordance with applicable provisions of EPA Method 19 (July 19, 2018) or where the standard is concentration based (e.g. parts per million dry volume corrected for oxygen).

II.A.6. Combustion process adjustment

II.A.6.a. Applicability

II.A.6.a.(i) As of January 1, 2017, this Section II.A.6. applies to boilers, duct burners, process heaters, stationary combustion turbines, and stationary reciprocating internal combustion engines with uncontrolled actual emissions of NO_x equal to or greater than five (5) tons per year that existed at major sources of NO_x (greater than or equal to 100 tpy NO_x) located in the 8-hour ozone control area as of June 3, 2016.

II.A.6.a.(ii) As of May 1, 2020, this Section II.A.6. applies to boilers, duct burners, process heaters, stationary combustion turbines, stationary reciprocating internal combustion engines, dryers, furnaces, and ceramic kilns with uncontrolled actual emissions of NO_x equal to or greater than five (5) tons per year that existed at major sources of NO_x (greater than or equal to 50 tpy NO_x) located in the 8-hour ozone control area as of January 27, 2020, that is not already subject as provided under Section II.A.6.a.(i).

- II.A.6.a.(iii) As of May 1, 2022, or May 31, 2023, for process heaters specified in Section II.A.4.g.(ii), this Section II.A.6. applies to process heaters with uncontrolled actual emissions of NO_x equal to or greater than five (5) tons per year that existed at sources that emit, or have the potential to emit, NO_x emissions greater than or equal to 25 tpy NO_x located in the 8-hour ozone control area as of July 20, 2021, that is not already subject as provided under Sections II.A.6.a.(i) or II.A.6.a.(ii).
- II.A.6.a.(iv) As of February 14, 2023, this Section II.A.6. applies to boilers, duct burners, stationary combustion turbines, stationary reciprocating internal combustion engines, dryers, furnaces, ceramic kilns, and process heaters with uncontrolled actual emissions of NO_x equal to or greater than five (5) tons per year that existed at major sources of NO_x (greater than or equal to 25 tpy NO_x) located in the 8-hour ozone control area as of November 7, 2022, that is not already subject as provided under Sections II.A.6.a.(i) through II.A.6.a.(iii).
- II.A.6.a.(v) As of February 14, 2023, this Section II.A.6. applies to boilers, duct burners, stationary combustion turbines, stationary reciprocating internal combustion engines, dryers, furnaces, ceramic kilns, and process heaters with uncontrolled actual emissions of NO_x equal to or greater than five (5) tons per year that existed at major sources of NO_x (greater than or equal to 100 tpy NO_x) in northern Weld County as of November 7, 2022.

II.A.6.b. Combustion process adjustment

- II.A.6.b.(i) When burning the fuel that provides the majority of the heat input since the last combustion process adjustment and when operating at a firing rate typical of normal operation, the owner or operator must conduct the following inspections and adjustments of boilers and process heaters, as applicable:
 - II.A.6.b.(i)(A) Inspect the burner and combustion controls and clean or replace components as necessary.
 - II.A.6.b.(i)(B) Inspect the flame pattern and adjust the burner or combustion controls as necessary to optimize the flame pattern.
 - II.A.6.b.(i)(C) Inspect the system controlling the air-to-fuel ratio and ensure that it is correctly calibrated and functioning properly.
 - II.A.6.b.(i)(D) Measure the concentration in the effluent stream of carbon monoxide and nitrogen oxide in ppm, by volume, before and after the adjustments in Sections II.A.6.b.(i)(A) through (C). Measurements may be taken using a portable analyzer.

- II.A.6.b.(ii) The owner or operator of a duct burner must inspect duct burner elements, baffles, support structures, and liners and clean, repair, or replace components as necessary.
- II.A.6.b.(iii) The owner or operator of a stationary combustion turbine must conduct the following inspections and adjustments, as applicable:
 - II.A.6.b.(iii)(A) Inspect turbine inlet systems and align, repair, or replace components as necessary.
 - II.A.6.b.(iii)(B) Inspect the combustion chamber components, combustion liners, transition pieces, and fuel nozzle assemblies and clean, repair, or replace components as necessary.
 - II.A.6.b.(iii)(C) When burning the fuel that provides the majority of the heat input since the last combustion process adjustment and when operating at a firing rate typical of normal operation, confirm proper setting and calibration of the combustion controls.
- II.A.6.b.(iv) The owner or operator of a stationary internal combustion engine must conduct the following inspections and adjustments, as applicable:
 - II.A.6.b.(iv)(A) Change oil and filters as necessary.
 - II.A.6.b.(iv)(B) Inspect air cleaners, fuel filters, hoses, and belts and clean or replace as necessary.
 - II.A.6.b.(iv)(C) Inspect spark plugs and replace as necessary.
- II.A.6.b.(v) The owner or operator of a dryer or furnace must inspect the burner and combustion controls and adjust, clean, and/or replace components as necessary.
- II.A.6.b.(vi) The owner or operator of a ceramic kiln must inspect and maintain the combustion controls and adjust the burners as necessary to ensure a proper air-to-fuel ratio. At units where entry into a piece of process equipment is required to complete the combustion process adjustment, in-kiln inspections and adjustments are required only during planned entries.
- II.A.6.b.(vii) The owner or operator must operate and maintain the boiler, duct burner, process heater, stationary combustion turbine, stationary internal combustion engine, dryer, furnace, or ceramic kiln consistent with manufacturer's specifications, if available, or good engineering and maintenance practices.
- II.A.6.b.(viii) Frequency

- II.A.6.b.(viii)(A) The owner or operator of boilers, duct burners, process heaters, stationary combustion turbines, and stationary reciprocating internal combustion engines with uncontrolled actual emissions of NO_x equal to or greater than five (5) tons per year that existed at major sources of NO_x (greater than or equal to 100 tpy NO_x) as of June 3, 2016, must conduct the initial combustion process adjustment by April 1, 2017. An owner or operator may rely on a combustion process adjustment conducted in accordance with applicable requirements and schedule of a New Source Performance Standard in 40 CFR Part 60 (November 17, 2016) or National Emission Standard for Hazardous Air Pollutants in 40 CFR Part 63 (November 17, 2016) to satisfy the requirement to conduct an initial combustion process adjustment by April 1, 2017.
- II.A.6.b.(viii)(B) The owner or operator of boilers, duct burners, process heaters, stationary combustion turbines, stationary reciprocating internal combustion engines, dryers, furnaces, and ceramic kilns with uncontrolled actual emissions of NO_x equal to or greater than five (5) tons per year that existed at major sources of NO_x (greater than or equal to 50 tpy NO_x) as of January 27, 2020, must conduct the initial combustion process adjustment by May 1, 2020. An owner or operator may rely on a combustion process adjustment conducted in accordance with applicable requirements and schedule of a New Source Performance Standard in 40 CFR Part 60 (December 19, 2019) or National Emission Standard for Hazardous Air Pollutants in 40 CFR Part 63 (December 19, 2019) to satisfy the requirement to conduct an initial combustion process adjustment by May 1, 2020.
- II.A.6.b.(viii)(C) The owner or operator of process heaters with uncontrolled actual emissions that emit, or have the potential to emit, NO_x equal to or greater than five (5) tons per year that existed at sources of NO_x located in the 8-hour ozone control area emissions greater than or equal to 25 tpy NO_x as of July 20, 2021, must conduct an initial combustion process adjustment by January 1, 2022, or January 1, 2024, for process heaters specified in Section II.A.4.g.(ii). An owner or operator may rely on a combustion process adjustment conducted in accordance with applicable requirements and schedule of a New Source Performance Standard in 40 CFR Part 60 (July 1, 2021) or National Emission Standard for Hazardous Air Pollutants in 40 CFR Part 63 (July 1, 2021) to satisfy the requirement to conduct an initial combustion process adjustment by January 1, 2022.

- II.A.6.b.(viii)(D) The owner or operator of boilers, duct burners, stationary combustion turbines, stationary reciprocating internal combustion engines, dryers, furnaces, and ceramic kilns with uncontrolled actual emissions of NO_x equal to or greater than five (5) tons per year that existed at major sources of NO_x (greater than or equal to 25 tpy NO_x) located in the 8-hour ozone control area as of November 7, 2022, must conduct the initial combustion process adjustment by May 1, 2024, unless a performance test is required under Section II.A.5.b.(ii) than within one year after the initial performance test. An owner or operator may rely on a combustion process adjustment conducted in accordance with applicable requirements and schedule of a New Source Performance Standard in 40 CFR Part 60 (July 1, 2022) or National Emission Standard for Hazardous Air Pollutants in 40 CFR Part 63 (July 1, 2022) to satisfy the requirement to conduct an initial combustion process adjustment.
- II.A.6.b.(viii)(E) The owner or operator of boilers, duct burners, stationary combustion turbines, stationary reciprocating internal combustion engines, dryers, furnaces, ceramic kilns, and process heaters with uncontrolled actual emissions of NO_x equal to or greater than five (5) tons per year that existed at major sources of NO_x (greater than or equal to 100 tpy NO_x) in northern Weld County as of November 7, 2022, must conduct the initial combustion process adjustment by May 1, 2024, unless a performance test is required under Section II.A.5.b.(ii) than within one year after the initial performance test. An owner or operator may rely on a combustion process adjustment conducted in accordance with applicable requirements and schedule of a New Source Performance Standard in 40 CFR Part 60 (July 1, 2022) or National Emission Standard for Hazardous Air Pollutants in 40 CFR Part 63 (July 1, 2022) to satisfy the requirement to conduct an initial combustion process adjustment.
- II.A.6.b.(viii)(F) The owner or operator must conduct subsequent combustion process adjustments at least once every twelve (12) months after the initial combustion adjustment, or on the applicable schedule according to Sections II.A.6.c.(1). or II.A.6.c.(ii).
- II.A.6.b.(viii)(G) Beginning January 1, 2022, the owner or operator of process heaters at a refinery must conduct subsequent combustion process adjustments at least once every six (6) months after the initial combustion adjustment, or on the applicable schedule according to Sections II.A.6.c.(i). or II.A.6.c.(ii).

II.A.6.c. As an alternative to the requirements described in Sections II.A.6.b.(i) through II.A.6.b.(viii):

- II.A.6.c.(i) The owner or operator may conduct the combustion process adjustment according to the manufacturer recommended procedures and schedule; or
 - II.A.6.c.(ii) The owner or operator of combustion equipment that is subject to and required to conduct a periodic tune-up or combustion adjustment by the applicable requirements of a New Source Performance Standard in 40 CFR Part 60 (July 1, 2022) or National Emission Standard for Hazardous Air Pollutants in 40 CFR Part 63 (July 1, 2022) may conduct tune-ups or adjustments according to the schedule and procedures of the applicable requirements of 40 CFR Part 60 (July 1, 2022) or 40 CFR Part 63 (July 1, 2022).
- II.A.7. Recordkeeping. The following records must be kept for a period of five years and made available to the Division upon request:
- II.A.7.a. The applicable emission limit and calculated heat input weighted emission limit for stationary combustion equipment demonstrating compliance for multiple fuels.
 - II.A.7.b. The 30-day rolling average emission rate calculated on a daily basis for sources using CERMS to comply with Section II.A.
 - II.A.7.c. The type and amount of fuel used.
 - II.A.7.d. The stationary combustion equipment's annual capacity factor on a calendar year basis.
 - II.A.7.e. All records generated to comply with the reporting requirements contained in Section II.A.8.
 - II.A.7.f. For stationary combustion equipment subject to the combustion process adjustment requirements in Section II.A.6., the following recordkeeping requirements apply:
 - II.A.7.f.(i) The owner or operator must create a record once every calendar year identifying the combustion equipment at the source subject to Section II.A. and including for each combustion equipment:
 - II.A.7.f.(i)(A) The date of the adjustment;
 - II.A.7.f.(i)(B) Whether the combustion process adjustment under Sections II.A.6.b.(i) through II.A.6.b.(vi) was followed, and what procedures were performed;
 - II.A.7.f.(i)(C) Whether a combustion process adjustment under Sections II.A.6.c.(i). and II.A.6.c.(ii). was followed, what procedures were performed, and what New Source Performance or National Emission Standard for Hazardous Air Pollutants applied, if any; and
 - II.A.7.f.(i)(D) A description of any corrective action taken.

- II.A.7.f.(i)(E) If the owner or operator conducts the combustion process adjustment according to the manufacturer recommended procedures and schedule and the manufacturer specifies a combustion process adjustment on an operation time schedule, the hours of operation.
 - II.A.7.f.(i)(F) If multiple fuels are used, the type of fuel burned and heat input provided by each fuel.
 - II.A.7.f.(ii) The owner or operator must retain manufacturer recommended procedures, specifications, and maintenance schedule if utilized under Section II.A.6.c.(i). for the life of the equipment.
 - II.A.7.f.(iii) As an alternative to the requirements described in Section II.A.7.f.(i), the owner or operator may comply with applicable recordkeeping requirements related to combustion process adjustments conducted according to a New Source Performance Standard in 40 CFR Part 60 (July 1, 2022) or National Emission Standard for Hazardous Air Pollutants in 40 CFR Part 63 (July 1, 2022).
- II.A.7.g. All sources qualifying for an exemption under Section II.A.2. must maintain all records necessary to demonstrate that an exemption applies.
- II.A.7.h. Records of semi-annual portable analyzer monitoring, including the date, engine settings on the date of the monitoring, and documentation of the results of the monitoring.
- II.A.8. Reporting
 - II.A.8.a. For affected units demonstrating compliance with Section II.A.4. using CEMS or CERMS in accordance with Section II.A.5.c.(i)(A), the owner or operator must submit to the Division the following information:
 - II.A.8.a.(i) Quarterly or semi-annual excess emissions reports no later than the 30th day following the end of each semi-annual or quarterly period, as applicable. Excess emissions means emissions that exceed the applicable limitations contained in Section II.A.4. Excess emission reports must include the information specified in 40 CFR Part 60, Section 60.7(c) (July 1, 2018).
 - II.A.8.b. For affected units demonstrating compliance with Section II.A.4 using performance testing pursuant to Section II.A.5.c.(ii)(C), the owner or operator must submit to the Division the following information:
 - II.A.8.b.(i) Performance test or portable analyzer testing reports within 60 days after completion of the performance test program or portable analyzer testing. All performance test reports must determine compliance with the applicable emission limitations set by Section II.A.4.

III. Control of Emissions from Specific Major Sources of VOC and/or NO_x in the 8-hour Ozone Control Area

III.A. Specific major sources of VOC and/or NO_x (greater than or equal to 100 tpy) as of June 3, 2016, located in the 8-hour Ozone Control Area.

III.A.1. Stationary internal combustion engines at the following major sources must comply with applicable NO_x emission limits and associated monitoring, recordkeeping, and reporting requirements in 40 CFR Part 60, Subpart IIII (July 1, 2016), 40 CFR Part 60, Subpart JJJJ (July 1, 2016), and/or 40 CFR Part 63, Subpart ZZZZ (July 1, 2016) as expeditiously as practicable, but no later than January 1, 2017:

III.A.1.a. National Reconnaissance Office (NRO) – Aerospace Data Facility (005-0028) – engines (pt 128, 139, 144).

III.A.1.b. Colorado State University (069-0011) – engines (pt 024, 035, 036, 037, 038, 040, 043, 052).

III.A.1.c. DCP Midstream, Greeley (123-0099) – engine (pt 102).

III.A.1.d. DCP Midstream, Kersey/Mewbourn (123-0090) – engine (pt 101).

III.A.1.e. DCP Midstream, Spindle (123-0015) – engines (pt 059, 075).

III.A.1.f. IBM (013-0006) – engines (pt 092, 094).

III.A.1.g. Owens-Brockway (123-4406) – engine (pt 024).

III.A.1.h. Plains End (059-0864) – engine (pt 005).

III.A.1.i. PSCo Cherokee (001-0001) – engine (pt 031).

III.A.1.j. Spindle Hill (123-5468) – engine (pt 005).

III.A.1.k. Suncor (001-0003) – engines (pt 150, 151).

III.A.1.l. Timberline Energy (123-0079) – engines (pt 010, 011).

III.A.2. Cemex Construction Materials (013-0003) must comply with applicable THC requirements and associated monitoring, recordkeeping, and reporting in 40 CFR Part 63, Subpart LLL (July 1, 2016) as expeditiously as practicable, but no later than January 1, 2017.

III.A.3. Denver Regional Landfill and Front Range Landfill (123-0079) (pt 007, 013) must comply with applicable flare requirements in 40 CFR Part 60, Subpart WWW (July 1, 2016) as expeditiously as practicable, but no later than January 1, 2017.

III.B. Specific major sources of VOC and/or NO_x (greater than or equal to 50 tpy) as of January 27, 2020, located in the 8-hour Ozone Control Area.

- III.B.1. Stationary internal combustion engines at the following major sources must comply with applicable NO_x emission limits and associated monitoring, recordkeeping, and reporting requirements in 40 CFR Part 60, Subpart IIII (July 1, 2016), 40 CFR Part 60, Subpart JJJJ (July 1, 2016), and/or 40 CFR Part 63, Subpart ZZZZ (January 30, 2013) as expeditiously as practicable, but no later than July 1, 2021:
 - III.B.1.a. University of Colorado Denver, Anschutz Medical Campus (001-0106) – engines (pts 011, 012, 013, 014, 015, 016, 017, 018, 020, 021).
 - III.B.1.b. Centura Health St. Anthony (059-1511) – engines (pts 002, 003).
- III.B.2. Flares at the following major sources must comply with applicable flare requirements in 40 CFR Part 60, Section 60.18 (December 22, 2008) as expeditiously as practicable, but no later than July 1, 2021.
 - III.B.2.a. Waste Management of Colorado Denver Arapahoe Disposal Site (005-1291) (pt 003).
- III.B.3. Front Range Energy (123-5097) must comply with applicable monitoring, recordkeeping, and reporting in 40 CFR Part 60, Subpart VV (July 1, 2019) as expeditiously as practicable, but no later than July 1, 2021.
- III.C. Specific major sources of VOC and/or NO_x (greater than or equal to 100 tpy) as of November 7, 2022, located in northern Weld County.
 - III.C.1. Beginning February 14, 2023, stationary combustion turbines with a maximum design heat input capacity equal to or greater than 10 MMBtu/hr located at the Cheyenne Compressor Station and Cheyenne Plains Compressor Station (123-0051).
 - III.C.1.a. Must comply with the following 1-hour average NO_x emission standards.
 - III.C.1.a.(i) Except as specified in Section III.C.1.a.(iii), turbines 123-0051-015: 24.5 ppmvd at 15 percent O₂.
 - III.C.1.a.(ii) Except as specified in Section III.C.1.a.(iii), turbines 123-0051-024 and 123-0051-014: 15 ppmvd at 15 percent O₂.
 - III.C.1.a.(iii) When temperatures are greater than -20 degrees and less than 0 degrees Fahrenheit: 42 ppmvd at 15 percent O₂. When temperatures are less than -20 degrees Fahrenheit: 120 ppmvd at 15 percent O₂.
 - III.C.1.b. Must comply with the combustion process adjustment requirements contained in Section II.A.6.b.(iii).
 - III.C.1.b.(i) The owner or operator must conduct an initial combustion process adjustment by May 1, 2024.
 - III.C.1.b.(ii) The owner or operator must conduct subsequent combustion process adjustments at least once every twelve (12) months after the initial combustion adjustment.
 - III.C.1.c. Must be operated in a manner consistent with good air pollution control practices for minimizing emissions at all times.

- III.C.1.d. Must comply with the following monitoring requirements.
 - III.C.1.d.(i) Conduct portable monitoring each calendar quarter using a portable flue gas analyzer.
 - III.C.1.d.(ii) At least annually, conduct portable monitoring at the temperatures specified in Section III.C.1.a.(iii), unless ambient conditions or extended periods at those temperatures are not sufficient to conduct the monitoring.
- III.C.1.e. The following records must be kept for a period of five (5) years and made available to the Division upon request.
 - III.C.1.e.(i) Records of the twelve-month rolling total of emissions.
 - III.C.1.e.(ii) Records of the number of hours that the turbine operates when the ambient temperature meets the criteria in Section II.C.1.a.(iii).
 - III.C.1.e.(iii) The combustion process adjustment records specified in Section II.A.7.f.
- III.C.2. Glycol dehydrators at the Cheyenne Compressor Station and Cheyenne Plains Compressor Station (123-0051) must comply with applicable control, monitoring, recordkeeping, and reporting in 40 CFR Part 63, Subpart HHH (November 19, 2020) beginning February 14, 2023.
- III.C.3. Flares at the Cheyenne Compressor Station and Cheyenne Plains Compressor Station (123-0051) must comply with applicable flare requirements in 40 CFR Part 63, Section 63.11 (December 22, 2008) beginning February 14, 2023.
- III.C.4. Beginning May 1, 2023, stationary internal combustion engines at the Cheyenne Compressor Station and Cheyenne Plains Compressor Station (123-0051) (pts 001, 007, 008, 011, 012, 013, 017) must comply with the following NO_x emission limits, monitoring, and recordkeeping requirements.
 - III.C.4.a. NO_x emissions standards.
 - III.C.4.a.(i) 2-stroke lean burn engines: 3.0 g/hp-hr.
 - III.C.4.a.(ii) 4-stroke lean burn engines: 1.2 g/hp-hr.
 - III.C.4.b. Conduct semi-annual portable analyzer monitoring for NO_x.
 - III.C.4.c. Comply with the combustion process adjustment requirements in Section I.D.5.e.(iv).
 - III.C.4.d. Recordkeeping. The following records must be kept for a period of five (5) years and made available to the Division upon request.
 - III.C.4.d.(i) Records of semi-annual portable analyzer monitoring, including the date, engine settings on the date of the monitoring, and documentation of the results of the monitoring.
 - III.C.4.d.(ii) The combustion process adjustment records specified in Section I.D.5.f.(vi).

- III.D. Golden Aluminum (123-0089) must submit a RACT analysis for the facility VOC emission point 007 to the Division no later than June 30, 2024. Approved RACT determinations will be addressed in the relevant source permit or through rule revisions, as appropriate.

IV. Control of Emissions from Breweries in the 8-hour Ozone Control Area

IV.A. Requirements for Brewing Operations

IV.A.1. Applicability

Except as provided in Section IV.A.2., the requirements of Section IV. apply to owners or operators of breweries that existed at a major source of VOC (greater than or equal to 100 tpy VOC) as of June 3, 2016, located in the 8-hour Ozone Control Area.

IV.A.2. Exemptions

The following emissions units are exempt from Sections IV.A.4. through IV.A.7. but must be maintained and operated in a manner consistent with good air pollution control practices for minimizing emissions. Owners or operators must also maintain records necessary to demonstrate that an exemption applies and make such records available to the Division upon request.

Once an emissions unit at a brewery no longer qualifies for an exemption, the owner or operator must comply with the applicable requirements of Sections IV.A.4. through IV.A.7. as expeditiously as practicable but no later than twelve (12) months after the exemption no longer applies, except as specified in Sections IV.A.2.c. and IV.A.2.d.

- IV.A.2.a. An emissions unit subject to a work practice or emission control requirement in another federally enforceable section of Regulation Number 7, Number 24, Number 25, and Number 26.
- IV.A.2.b. An emissions unit with total uncontrolled actual emissions less than two (2) tons per year VOC on a calendar year basis.
- IV.A.2.c. Equipment or activities related to research and development. Research and development ends when the product is sold or offered for sale.
- IV.A.2.d. Newly installed, upgraded, or replaced packaging operations for a duration of six months after startup.

IV.A.3. Definitions

- IV.A.3.a. "Brewery" means a source that produces malt beverage and is comprised of emissions units related to brewhouse operations, fermentation, aging or secondary fermentation, and/or packaging operations.
- IV.A.3.b. "Packaging operation" means the canning, bottling, or filling of malt beverages into a container. Packaging operations include keg filling. Packaging operations do not include the railcar loading and unloading of beer concentrate shipped off-site for packing.
- IV.A.3.c. "Pilot brewery operation" means an operation where total packaging operations are less than 50,000 barrels per year.

- IV.A.3.d. "Process loss" means the difference between the quantity of malt beverage sent to packaging and the quantity of malt beverage packaged into a container. Process loss does not include malt beverage in filled containers if the malt beverage is processed after filling to remove or recover ethanol.
- IV.A.4. Emission limitations. By May 1, 2019, no owner or operator of a brewery may exceed an average of 6 percent process loss across all packaging operations in a calendar month and 4 percent process loss on a 12-month rolling average during packaging operations.
- IV.A.5. Packaging operation work practices
- IV.A.5.a. The owner or operator must develop performance objectives and metrics for each packaging operation to reduce spillage and process loss. Process loss records must be summarized annually and compared to performance objectives established by the owner or operator. Process loss records and summaries must be made available to the Division upon request.
- IV.A.5.b. The owner or operator must develop and implement an operator training program for employees engaged in packaging operations to understand the operation of the filling lines and minimize breakdowns, spillage, and process loss. The operator training materials must be made available to the Division upon request. At a minimum, the training program must include:
- IV.A.5.b.(i) A brewery training manager, coordinator, or equivalent;
- IV.A.5.b.(ii) Written standard operating procedures for packaging operations;
- IV.A.5.b.(iii) A requirement that initial training be conducted for employees performing packaging operations and more frequently for the following:
- IV.A.5.b.(iii)(A) Employees changing packaging operation responsibilities; and
- IV.A.5.b.(iii)(B) Startup of new, upgraded, or replaced packaging operations.
- IV.A.5.c. The owner or operator must use and maintain packaging operation equipment to reduce container breakage and process loss. For packaging operations, except at pilot brewery operations, this includes, but is not limited to:
- IV.A.5.c.(i) Using and maintaining automated filling equipment according to manufacturer recommended procedures or good engineering practices;
- IV.A.5.c.(ii) Installing and operating fill level detectors to monitor the liquid fill levels in containers;
- IV.A.5.c.(ii) Installing and operating crown inspectors to monitor the condition of crowns and/or caps applied to bottles, if applicable; and

IV.A.5.c.(iv) Utilizing methods to reduce container damage and spillage. This includes, but is not limited to, installing and operating container handling equipment, including smooth glide rails, lubricated conveyors, and variable speed equipment drives.

IV.A.5.d. The owner or operator of pilot brewery operations must use and maintain packaging operation equipment to reduce container breakage and process loss. This includes, but is not limited to:

IV.A.5.d.(i) Maintaining filling equipment according to manufacturer recommended procedures or good engineering practices;

IV.A.5.d.(ii) Monitoring the liquid fill levels in containers; and

IV.A.5.d.(iii) Utilizing methods to reduce container damage and spillage. This includes, but is not limited to, installing and operating container handling equipment, including smooth glide rails, lubricated conveyors, and variable speed equipment drives.

IV.A.6. Wastewater management and treatment. Owners or operators employing microbial and vegetative destruction of VOCs through the land application of wastewater must ensure that the areas where wastewater is applied are areas covered with vegetation at all times when wastewater is applied, except as required following tilling and seeding for crop rotation and field work per standard agricultural practices.

IV.A.7. Recordkeeping

The following records must be kept for a period of five (5) years and made available to the Division upon request:

IV.A.7.a. Monthly records of the percent process loss for packaging operations;

IV.A.7.b. Records necessary to demonstrate compliance with the packaging operation work practice requirements in Section IV.A.5.; and

IV.A.7.c. If applicable, pursuant to Section IV.A.6., monthly and annual records of the amount of wastewater (gallons) sent to the land application site.

V. Control of Emissions from Foam Manufacturing in the 8-hour Ozone Control Area

V.A. Requirements for Foam Product Manufacturing

V.A.1. Applicability

V.A.1.a. Except as provided in Section V.A.2., the requirements of Section V. apply to owners or operators of foam manufacturing operations that existed at a major source of VOC (greater than or equal to 50 tpy VOC) as of January 27, 2020, located in the 8-hour Ozone Control Area.

V.A.1.b. Except as provided in Section V.A.2., the requirements of Section V. apply to owners or operators of foam manufacturing operations that existed at a major source of VOC (greater than or equal to 25 tpy VOC) as of November 7, 2022, located in the 8-hour Ozone Control Area.

V.A.2. Exemptions

Any foam manufacturing operation that uses only non-VOC blowing agents is exempt from this Section V.A.

V.A.3. Definitions

- V.A.3.a. "Blowing agent" means any liquid, gaseous or solid substance that alone or in conjunction with other substances is capable of producing a cellular (foam) structure in a polymeric material.
- V.A.3.b. "Expandable polystyrene (EPS) beads" means polystyrene beads, particles, or granules, usually less than one-twelfth inch in diameter, that are formulated with a blowing agent (typically 3.5% to 7% of bead weight). When subjected to prescribed heating in an expansion system, the beads puff up, expanding many times their original volume into low density foam globules (called "prepuff" or "puff") from which a variety of EPS foam products are molded.
- V.A.3.c. "Expanded polystyrene (EPS) foam" means a lightweight, foam material, made of polystyrene, from which a variety of common items are made, such as ice-chests, insulation board, protective packaging, and single-use cups.
- V.A.3.d. "Foam" means a solid material in a lightweight cellular form (having internal voids or cavities called cells that contain air or a gas) resulting from the introduction or generation of gas bubbles throughout its mass during processing.
- V.A.3.e. "Foam manufacturing operation" means any EPS production line, or portion of a production line, which processes raw EPS bead into final molded EPS product. Production line processes include, but are not limited to: pre-expansion, aging (pre-puff), and molding. The manufacturing process ends after the product exits the EPS mold. "Foam manufacturing operation" also means any production line processing methylene diphenyl diisocyanate (MDI), resins, and various hardeners and thickeners into foam products and which results in VOC emissions into the atmosphere. The manufacturing process ends after the product exits the drying tunnel.
- V.A.3.f. "Non-VOC blowing agent" means a blowing agent which does not contain VOCs.
- V.A.3.g. "Polystyrene" means any grade, class, or type of thermoplastic polymer, alloy, or blend that is composed of at least 80% polymerized styrene by weight.
- V.A.3.h. "Raw material" means all polystyrene, polyethylene and polypropylene, and blowing agent used in the manufacture of foam products.

V.A.4. Emission Limitations

V.A.4.a. By May 1, 2022, for sources subject pursuant to Section V.A.1.a. and by May 1, 2024, for sources subject pursuant to Section V.A.1.b., owners and operators of foam manufacturing operations must either

V.A.4.a.(i) Limit VOC emissions from foam manufacturing to 3.0 lbs. per 100 lbs. of total material process, averaged monthly, or

V.A.4.a.(ii) Control VOC emissions from foam manufacturing by 90%. The control device must have a control efficiency of at least 95%.

V.A.5. Work Practices

The owner or operator of any foam manufacturing operation must implement the following work practice requirements at all times to reduce VOC emissions from fugitive sources.

V.A.5.a. Store raw materials in closed, leak-free, labeled containers when not in use.

V.A.5.b. Cover open containers in a manner that minimizes evaporation into the atmosphere.

V.A.6. Monitoring

V.A.6.a. The owner or operator of foam manufacturing operations must operate and maintain the control device consistent with the manufacturer's specifications.

V.A.6.b. By November 1, 2022, and every three (3) years afterward, owners or operator of foam manufacturing operations must conduct a performance test during representative operations using EPA Method 24 (October 7, 2020) to determine VOC content and EPA Method 18, 25, or 25A (November 14, 2018) to determine control efficiency of the emission control equipment.

V.A.7. Recordkeeping

The following records must be kept for a period of five (5) years and made available to the Division upon request

V.A.7.a. Any records necessary to demonstrate that an exemption in Section V.A.2. applies.

V.A.7.b. The amount of raw material processed on a daily basis.

V.A.7.c. The type of blowing agent used.

V.A.7.d. The amount of blowing agent used on a monthly basis.

V.A.7.e. The total monthly VOC emissions.

V.A.7.f. For operators complying with the emission limitation in Section V.A.4.a.(i), the total monthly VOC emissions calculated on a pounds per 100 lbs. of material processed basis.

- V.A.7.g. For operators that use a control device to comply with the emission limitations in Section V.A.4.a.
 - V.A.7.g.(i) A manufacturer guarantee of the control equipment's emission control efficiency to demonstrate compliance with Section V.A.4.
 - V.A.7.g.(ii) The amount of supplementary natural gas combusted in the control device on a monthly basis.
 - V.A.7.g.(iii) Records of performance tests conducted pursuant to Section V.A.6.
- V.A.7.h. Records of calendar year VOC emission estimates demonstrating whether the foam manufacturing operation meets or exceeds the applicability threshold in Section V.A.1.

V.A.8. Reporting

- V.A.8.a. Performance test protocols required for performance tests under Section V.A.6.b. must be submitted to the Division for review at least thirty (30) days prior to testing and in accordance with AQCC Common Provisions Regulation Section II.C.

VI. Control of Emissions from Bakeries in the 8-hour Ozone Control Area

VI.A. Requirements for Bakeries

VI.A.1. Applicability

Beginning May 1, 2023, the requirements of Section VI. apply to owners or operators of bakery operations and bakery recycling that existed at a major source of VOC (greater than or equal to 25 tpy VOC) as of November 7, 2022, located in the 8-hour Ozone Control Area.

VI.A.2. Definitions

- VI.A.2.a. "Bakery operation" means the facility and equipment producing flour-based food baked in an oven.
- VI.A.2.b. "Bakery oven" means an enclosed compartment supplied with heat used to bake yeast-leavened products including, but not limited to, bread, buns, and rolls.
- VI.A.2.c. "Bakery recycling" means the processing of bakery and snack food scrap into animal feed suitable for cattle, swine, and poultry.
- VI.A.2.d. "Oven" means a chamber used to bake by means of heat. This does not include proof boxes.
- VI.A.2.e. "Proof box" means a warm, humid chamber where yeast-leavened dough is allowed to rise to the volume desired for baking.

VI.A.3. Work practices

- VI.A.3.a. Operate and maintain each oven in accordance with the manufacturer's design and operating specifications.

- VI.A.3.b. Clean each oven and proof box in accordance with the manufacturer's recommendations and the facility's sanitation standard operating procedures.
- VI.A.3.c. Optimize the addition of yeast, fermentation and baking times, and process temperatures to minimize emissions.
- VI.A.3.d. Clean bakery recycling dryer and associated ducting in accordance with manufacturer recommendations and the facility's standard operating procedures.
- VI.A.3.e. Maintain and operate the oxidizer whenever bakery recycling dryer or bakery oven is in operation, specifically, but not limited to, maintaining the oxidizer temperature in the manufacturer recommended range.
- VI.A.3.f. Maintain the oxidizer in accordance with manufacturer recommended maintenance procedures to ensure proper operation of the oxidizer.

VI.A.4. Control requirements

- VI.A.4.a. Except as provided in Section VI.A.4.b., the owner or operator of a bakery operation must vent bakery oven emissions to an emission control device with a VOC destruction efficiency of at least 95%.
- VI.A.4.b. Bakery operations that are not controlling bakery oven emissions as in Section VI.A.4.a. as of May 1, 2023, must install and operate the required emission control device by May 1, 2025.
- VI.A.4.c. The owner or operator of a bakery recycling operation must vent bakery and snack food scrap drying emissions to an emission control device with a VOC destruction efficiency of at least 95%.
- VI.A.4.d. In the event of a bakery oven control device shutdown during production, the owner or operator must immediately stop sponge production. Once the product in the oven has completed the baking cycle, the owner or operator must shutdown the oven until the control device is operating again.

VI.A.5. Recordkeeping

The following records must be kept for a period of five (5) years and made available to the Division upon request.

- VI.A.5.a. Records of the calendar year VOC emission estimates demonstrating whether the bakery operation meets or exceeds the applicability threshold in Section VI.A.1.
- VI.A.5.b. Monthly records of flour based food production.
- VI.A.5.c. Records of the oven and/or proof box manufacturer design and operating specifications.
- VI.A.5.d. Records of the oven and/or proof box manufacturer cleaning recommendations.

- VI.A.5.e. Records of the facility's sanitation standard operating procedures.
- VI.A.5.f. Records demonstrating compliance with the operating, maintenance, cleaning, and optimization requirements in Section VI.A.3., including records of the manufacturer recommended maintenance procedures.
- VI.A.5.g. Records of the oxidizer operating temperature.
- VI.A.5.h. Records of the manufacturer guarantee of the control equipment's emission destruction efficiency or a performance test conducted during representative operations in accordance with EPA Method 18, 25, 25A, 2, or 2C (November 14, 2018), whichever is applicable.
- VI.A.5.i. Records of production without an operating control device as described in Section VI.A.4.d., including the date and time, the ovens and products running, a description of the problems observed, a description of actions taken to minimize emissions during the event, a description and date of any corrective actions taken, and the name of the individual(s) performing corrective actions.

VII. Control of Emissions from Poultry Waste Processing in the 8-hour Ozone Control Area

VII.A. Requirements for Poultry Waste Processing

VII.A.1. Applicability

Beginning May 1, 2023, the requirements of Section VII. apply to owners or operators of poultry waste processing operations that existed at a major source of VOC (greater than or equal to 25 tpy VOC) as of November 7, 2022, located in the 8-hour Ozone Control Area.

VII.A.2. Definitions

- VII.A.2.a. "Poultry waste" means poultry manure and spent hens.

VII.A.3. Work practices

- VI.A.3.a. Operate and maintain each dryer in accordance with the manufacturer's design, operating, and maintenance specifications.
- VI.A.3.b. Conduct weekly inspections of the dryers.

VII.A.4. Recordkeeping

The following records must be kept for a period of five (5) years and made available to the Division upon request.

- VII.A.4.a. Records of the calendar year VOC emission estimates demonstrating whether the poultry waste processing operation meets or exceeds the applicability threshold in Section VII.A.1.
- VII.A.4.b. Records of the dryer manufacturer specifications.
- VII.A.4.c. Records of dryer inspections, including the time and date of each inspection, a description of any problems observed, and a description and date of any corrective action(s) taken,

VIII. Control of Emissions from Industrial Waste Facilities in the 8-hour Ozone Control Area

VIII.A. Requirements for solid waste facilities that dispose of oil and gas waste

VIII.A.1. Applicability

Beginning May 1, 2023, the requirements of Section VIII. apply to owners or operators of solid waste facilities that dispose of oil and gas waste that existed at a major source of VOC (greater than or equal to 25 tpy VOC) as of November 7, 2022, located in the 8-hour Ozone Control Area.

VIII.A.2. Definitions

VIII.A.2.a. "Solid waste" means any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, air pollution control facility, or other discarded material; including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, or community activities. Solid waste does not include solid or dissolved materials in domestic sewage, or solid or dissolved material in irrigation return flows or industrial discharges which are point sources subject to permits under the provisions of the Colorado Water Control Act, Title 25, Article 8, CRS, or materials handled at facilities licensed pursuant to the provisions of the Radiation Control Act in Title 25, Article 11, CRS. Solid waste does not include materials handled at facilities licensed pursuant to the provisions of radiation control in Title 25, Article 11, CRS; excluded scrap metal that is being recycled; or shredded circuit boards that are being recycled.

VIII.A.3.b. "Solid waste facility" means the location and/or facility at which the deposit and final treatment of solid wastes occur.

VIII.A.3.c. "Oil and gas waste" means drilling fluids, produced waters, and other wastes associated with the exploration, development, or production of oil or natural gas.

VIII.A.3. Work practices

VIII.A.3.a. Combine liquid oil and gas waste with a bulking/solidification material that impeded vaporization.

VIII.A.3.b. Direct bury oil and gas waste solids as soon as possible to limit air emissions.

VIII.A.3.c. Implement good air pollution practices that limit air emissions from oil and gas waste during intra-facility transport of materials to burial locations.

VIII.A.4. Recordkeeping

The following records must be kept for a period of five (5) years and made available to the Division upon request.

VIII.A.4.a. Records of the amount of oil and gas waste processed on a monthly basis by weight or volume.

- VIII.A.4.b. Records demonstrating compliance with the work practice requirements in Section VIII.A.3.

PART C Statements of Basis, Specific Statutory Authority and Purpose

I. April 20, 2023

This Statement of Basis, Specific Statutory Authority, and Purpose complies with the requirements of the State Administrative Procedure Act, § 24-4-101, C.R.S., et seq., the Colorado Air Pollution Prevention and Control Act, § 25-7-101, C.R.S., et seq., and the Air Quality Control Commission's (Commission) Procedural Rules, 5 C.C.R. §1001-1.

Basis

To improve the readability and usability of Regulation Number 7 and Regulation Number 22, the Commission adopted revisions restructuring and reorganizing the parts and sections.

Specific Statutory Authority

The Colorado Air Pollution Prevention and Control Act, § 25-7-101, C.R.S., et seq. (the State Air Act or the Act), specifically § 25-7-103.3, directs rule-making agencies, such as the Commission, to review their rules and consider whether the rule is necessary; whether the rule overlaps or duplicates other rules of the agency or with other federal, state, or local government rules; whether the rule is written in plain language and is easy to understand; whether the rule has achieved the desired intent and whether more or less regulation is necessary; whether the rule can be amended to give more flexibility, reduce regulatory burdens, or reduce unnecessary paperwork or steps while maintaining its benefits; whether the rule is implemented in an efficient and effective manner, including the requirements for the issuance of permits and licenses; whether a cost-benefit analysis was performed by the applicable rule-making agency; and whether the rule is adequate for the protection of the safety, health, and welfare of the state or its residents. Based on this review, the rule-making agency will determine whether the existing rules should be continued in their current form, amended, or repealed.

Purpose

The following section sets forth the Commission's purpose in adopting the revisions to Regulation Number 26. The Commission reorganized Regulation Number 7 into four regulations: Part B became Regulation Number 24; Part C became Regulation Number 25; Part D remained in Regulation Number 7; and Part E became Regulation Number 26. The upstream oil and gas intensity and midstream combustion program provisions currently in Regulation Number 22 moved to Regulation Number 7. The manufacturing sector greenhouse gas provisions in Regulation Number 22 became a new Regulation Number 27. To assist in tracking the history of the regulatory revisions, associated statements of basis and purpose, and restructured location, the Commission provides the following tracking table.

Year of rule adoption	Date of rule adoption	Summary of rule(s) adopted	Regulation Number 7 Section (pre-2019 numbering)	Regulation Number 7 Section (numbering as of 12.2022)	Rule & Section (as of 4.2023)
1995	Dec. 21	Clarify substances that are negligibly reactive VOCs.	Section II.B.	Part A, Section II.B.	Regulations 7 and 24-26, Part A
1996	Mar. 21	Revisions related to the maintenance demonstration.	Sections I.A.1. through I.A.4.; II.D.; II.E.	Part A, Sections I.A.1. through I.A.4.; II.D.; II.E.	Regulations 7 and 24-26, Part A

Year of rule adoption	Date of rule adoption	Summary of rule(s) adopted	Regulation Number 7 Section (pre-2019 numbering)	Regulation Number 7 Section (numbering as of 12.2022)	Rule & Section (as of 4.2023)
1996	Nov. 21	Updated NR VOC list. Removed control of VOC emissions from dry cleaning facilities using perchloroethylene.	Section XII.	NA	NA
1998	Oct. 15	Revisions specific to Gates Rubber Company.	Section II.F.	NA	Regulation 24-25, Part A
2001	Jan. 11	Correct discrepancies in posted versus adopted provisions.	Sections III.C.; IX.L.2.c.(1); X.D.2. through XI.A.3.	Part B, Section I.; Part C, Section I.; Part C, Sections II. through III.	Regulation 24, Part B; Regulation 25, Part B (fkna Part C)
2003	Nov. 20	Repealed provisions establishing a procedure for granting exemptions for de minimis sources and for approving alternative compliance plans.	Sections I.A.2. through I.A.4.; II.D.; II.E.	Part A, Sections I.A.1. through I.A.4.; II.D.; II.E.	Regulations 7 and 24-26, Part A
2004	Mar. 12	Revisions adopted in conjunction with the early action compact ozone action plan – control of emissions from condensate operation at oil and gas facilities, emissions from internal combustion engines, emissions from gas processing plants, and emissions from oil and gas operations dehydrators.	Sections I.A.; I.B.; XII.; XVI.	Part A, Section I.A.; Part A, Section I.B.; Part D, Section I.; Part E, Section I.	Regulations 7 and 24-26, Part A
2004	Dec. 16	Revisions adopted in response to EPA comments (re practical enforceability) on the ozone action plan adopted 3/2004.	Sections I.A.; II.A.; XII.; XVI.;	Part A, Section I.A.; Part A, Section II.A.; Part D, Section I.; Part E, Section I.	Regulations 7 and 24-26, Part A
2006	Dec. 17	Expanding oil and gas condensate tank emission controls.	Section XII.	Part D, Section I.	Regulation Number 7, Part B (fkna Part D)
2006	Dec. 17	Reduce emissions from oil and gas operations and natural gas fired engines.	Sections I.A.1.b.; XVII.	Part A, Section I.A.; Part D., Section II. & Part E. Section I. (for engines)	Regulation Number 7, Part A and Part B (fkna Part D); Regulation 26, Part A and Part B (fkna Part E)
2008	Dec. 12	Expand VOC RACT requirements for 100 tpy sources and clarify how RACT requirements in Regulation Numbers 3 and 7 interact in the ozone nonattainment area. Make typographical and formatting changes. Revise oil and gas condensate tank and pneumatic controller requirements.	Title; Sections I.; II.; VI. through XIII.; XVII.; XVIII.; and Appendices A through F	Part A, Section I.; Part A, Section II.; Part B, Sections IV. through VI. & Part C, Sections I. through IV. & Part D, Section I.; Part D, Section II. and Part E, Section I. (for engines); Part D, Section III.; Part A, Appendix A. & Part B, Appendices B and C & Part C, Appendices D and E (formerly Appendix F)	Regulation 24, Part B; Regulation 25, Part B (fkna Part C); Regulation Number 7, Part B (fkna Part D); Regulation 26, Part B (fkna Part E)

Year of rule adoption	Date of rule adoption	Summary of rule(s) adopted	Regulation Number 7 Section (pre-2019 numbering)	Regulation Number 7 Section (numbering as of 12.2022)	Rule & Section (as of 4.2023)
2011	Jan. 7	Include engine requirements in the Regional Haze SIP.	Outline; Sections I.; XVII.	Part A, Section I.; Part E, Section I.	Regulation 26, Part B (fkna Part E)
2012	Dec. 20	Address EPA comments on the June 2009 submittal. Revise state-only requirements for consistency.	Sections II.; XII.; XVII.	Part A, Section II.; Part D, Section I.; Part D, Section II.	Regulation Number 7, Part B (fkna Part D)
2014	Feb. 23	Adopt additional oil and gas emission reduction requirements – auto-igniters, expand condensate tank controls, limit storage tank venting, expand dehydrator control, establish leak detection and repair program, limit venting during well maintenance and liquids unloading, expand pneumatic controller requirements.	Sections II.; XVII.; XVIII.	Part A, Section II.; Part D, Section II.; Part D, Section III.	Regulation Number 7, Part B (fkna Part D)
2016	Nov. 17	Adopt RACT requirements for industrial cleaning solvents, lithographic and letterpress printing, and specific major sources. Including existing combustion device auto-igniter and storage tank inspection requirements in the SIP. Adopting major source combustion equipment combustion process adjustment requirements and incorporate by reference NSPS and NESHAP for specific major sources.	Sections I.; X.; XII.; XIII.; XVI.; XIX.	Part A, Section I.; Part C, Section II.; Part D, Section I.; Part C, Section IV.; Part C, Section V.; Part E, Section III.	Regulation 25, Part B (fkna Part C); Regulation Number 7, Part B (fkna Part D); Regulation 26, Part B (fkna Part E)
2017	Nov. 16	Adopt provisions based on recommendations in EPA's Oil and Gas Control Techniques Guideline. Revise state-only requirements for consistency.	Sections II.; XII.; XVII.; XVIII.	Part A, Section II.; Part D, Section I.; Part D, Section II.; Part D, Section III.	Regulation Number 7, Part B (fkna Part D)
2018	July 19	Adopt requirements for existing major source boilers, turbines, lightweight aggregate kilns, glass melting furnaces, engines.	Sections XVI.; XIX.	Part E, Section II.; Part E, Section III.	Regulation 26, Part B (fkna Part E)
2018	Nov. 15	Adopt requirements for major source breweries and wood furniture manufacturing. Address EPA concerns with requirements for industrial cleaning solvents, metal furniture surface coating, and miscellaneous metal surface coating. Updated incorporation by reference dates.	Sections I.; II.; VI.; VIII.; IX.; X.; XII.; XIII.; XVI.; XVII.; XIX.; XX.; XXI.	Part A, Section I.; Part A, Section II.; Part B, Section IV.; Part B, Section VI.; Part C, Section I.; Part C, Section X.; Part D, Section I.; Part C, Section IV.; Part C, Section V.; Part D, Section II.; Part E, Section III.; Part E, Section IV. Part F	Regulation 24, Part B; Regulation 25, Part B (fkna Part C); Regulation Number 7, Part B (fkna Part D); Regulation 26, Part B (fkna Part E); Regulation 23 (fkna Part F)

Year of rule adoption	Date of rule adoption	Summary of rule(s) adopted	Regulation Number 7 Section (pre-2019 numbering)	Regulation Number 7 Section (numbering as of 12.2022)	Rule & Section (as of 4.2023)
2019	Dec. 19	Reorganized into Parts A through F. Replaced the SIP system-wide condensate tank control program with a fixed threshold storage tank control program. Increased state-only, state-wide storage tank controls. Adopted oil and gas storage tank measurement system, hydrocarbon liquids loadout, leak detection and repair, well plugging, and pneumatic controller requirements. Adopted an oil and gas transmission and storage segment methane intensity program. Adopted an annual oil and gas inventory program. Expanded SIP requirements to 50 tpy sources. Aligned gasoline tank truck testing requirements with federal requirements as SIP clean-up.	Sections I. through XX. and Appendices A through F	(see reorganization cross walk)	
2020	Sept. 23	Adopted requirements for natural gas fired 1,000 horsepower engines. Adopted flowback vessel control requirements and pre- and early-production monitoring requirements. Expanded hydrocarbon liquids loadout requirements to class II disposal well facilities.		Part D, Sections II.; IV.; V.; VI.; Part E, Section I.	Regulation Number 7, Part B (fkna Part D); Regulation 26, Part B (fkna Part E)
2020	Dec. 18	Adopted requirements for major source foam manufacturing, boilers, turbines, landfill and biogas fired engines, and wood surface coating.		Part D, Section II.; Part E, Sections II.; IV.; V.	Regulation Number 7, Part B (fkna Part D); Regulation 26, Part B (fkna Part E)
2021	Feb. 18	Adopted non-emitting pneumatic controller requirements for new facilities and existing pneumatic controller retrofit requirements for existing facilities.		Part D, Section III.	Regulation Number 7, Part B (fkna Part D)
2021	July 16	Adopted requirements for metal parts surface coating and major source process heaters.		Part C, Section I.; Part D, Section III.; Part E, Section II.	Regulation 25, Part B (fkna Part C); Regulation Number 7, Part B (fkna Part D); Regulation 26, Part B (fkna Part E)
2021	Dec. 17	Adopted SIP revisions to address EPA concerns with the EPA Oil and Gas CTG. Adopted oil and gas combustion device performance testing requirements. Expanded reciprocating compressor rod packing, leak detection and repair, and pneumatic controller requirements at natural gas processing plants. Expanded leak detection and repair, separator, and well maintenance requirements. Adopted pigging and blowdown requirements.		Part D, Sections I., II., III., V., VI.	Regulation Number 7, Part B (fkna Part D)
2022	Dec. 15	Adopted requirements for major source		Part E, Sections	Regulation 24,

Year of rule adoption	Date of rule adoption	Summary of rule(s) adopted	Regulation Number 7 Section (pre-2019 numbering)	Regulation Number 7 Section (numbering as of 12.2022)	Rule & Section (as of 4.2023)
		combustion equipment, wood coating, solvent use, bakery operation, digital printing, poultry waste processing, oil stabilization facilities, class II injection well facilities, and industrial waste; included state only provisions as SIP strengthening measures; clarified the applicability of requirements to newly classified ozone nonattainment areas; included requirements for motor vehicle materials and automotive coatings; expanded gasoline tank truck testing requirements.		I., II., III., VI., VII., and VIII., Part C., Sections I., II., and IV., and Part D, Section II.; Part D, Sections II., ; Part A, Sections I. and II.; Part C, Section I.; and Part B, Section IV.	Part B (fkna Part B); Regulation 25, Part B (fkna Part C); Regulation Number 7, Part B (fkna Part D); Regulation 26, Part B (fkna Part E)

The Commission also made typographical, grammatical, and formatting corrections throughout the regulations.

Incorporation by Reference

The Commission will update regulatory references as needed as opportunities arrive.

Additional Considerations

These revisions are administrative in nature and, therefore, do not exceed or differ from the requirement of the federal act or rules. Therefore, § 25-7-110.5(5)(a) does not apply.

Findings of Fact

To the extent that § 25-7-110.8, C.R.S., requirements apply to this rulemaking, and after considering all the information in the record, the Commission hereby makes the determination that:

- (I) These rules are based upon reasonably available, validated, reviewed, and sound scientific methodologies, and the Commission has considered all information submitted by interested parties.
- (II) Evidence in the record supports the finding that the rules shall result in a demonstrable reduction of greenhouse gas and VOC emissions.
- (III) Evidence in the record supports the finding that the rules shall bring about reductions in risks to human health and the environment that justify the costs to implement and comply with the rules.
- (IV) The rules are the most cost-effective alternative to achieve the necessary reduction in air pollution and provide the regulated entity flexibility.
- (V) The selected regulatory alternative will maximize the air quality benefits of regulation in the most cost-effective manner.

II. December 15, 2023 (Revisions to Part A, Section I.C.; and Part B, Sections I.D.5., I.D.6., II., III.D., and V.)

This Statement of Basis, Specific Statutory Authority, and Purpose complies with the requirements of the State Administrative Procedure Act, § 24-4-101, C.R.S., et seq., the Colorado Air Pollution Prevention and Control Act, § 25-7-101, C.R.S., et seq., and the Air Quality Control Commission's (Commission) Procedural Rules, 5 C.C.R. §1001-1.

Basis

On October 7, 2022, EPA reclassified the Denver Metro/North Front Range (DM/NFR) to severe for the 2008 8-hour Ozone National Ambient Air Quality Standard of 75 parts per billion (ppb) (2008 ozone NAAQS), after 2019-2021 ozone data failed to show attainment. See 86 Fed. Reg. 60926. Separately, EPA has also designated the DM/NFR as marginal nonattainment for the 2015 ozone NAAQS of 70 ppb, effective August 3, 2018 (83 Fed. Reg. 25776 (June 4, 2018)). On November 30, 2021, EPA expanded the boundary of the 2015 ozone nonattainment area to include all of Weld County, effective December 30, 2021 (86 Fed. Reg. 67864). On October 7, 2022, EPA reclassified the DM/NFR and northern Weld County to moderate, after 2019-2021 ozone data failed to show attainment. See 86 Fed. Reg. 60897.

To ensure progress towards attainment of the 2008 and 2015 ozone NAAQS and respond to Colorado's requirements under the Clean Air Act, the Commission adopted revisions to include reasonably available control technology (RACT) for major sources of volatile organic compounds (VOC) and nitrogen oxides (NOx) in the nonattainment areas, specifically expanding requirements for foam manufacturing, modifications to requirements for landfill and biogas fuel fired engines, modifications to requirements for process heaters, and a requirement for additional major source RACT analyses. The Commission also adopted additional, state-only, state-wide requirements for stationary combustion engines.

Specific Statutory Authority

The State Air Act, specifically § 25-7-105(1), directs the Commission to promulgate such rules and regulations as are consistent with the legislative declaration set forth in § 25-7-102 and that are necessary for the proper implementation and administration of Article 7. The Act broadly defines air pollutant to include essentially any gas emitted into the atmosphere (and, as such, includes VOC, NOx, methane and other hydrocarbons) and provides the Commission broad authority to regulate air pollutants. Section 105(1)(a)(I) directs the Commission to adopt a state implementation plan (SIP) to attain the NAAQS. § 25-7-106 provides the Commission maximum flexibility in developing an effective air quality program and promulgating such combination of regulations as may be necessary or desirable to carry out that program. § 25-7-106 also authorizes the Commission to promulgate emission control regulations applicable to the entire state, specified areas or zones, or a specified class of pollution. § 25-7-106(6) further authorizes the Commission to require owners and operators of any air pollution source to monitor, record, and report information. §§ 25-7-109(1)(a) and (2) of the Act authorize the Commission to promulgate regulations requiring effective and practical air pollution controls for significant sources and categories of sources and emission control regulations pertaining to nitrogen oxides and hydrocarbons.

Purpose

The following section sets forth the Commission's purpose in adopting the revisions to Regulation Number 26, and includes the technological and scientific rationale for the adoption of the revisions.

Stationary Combustion Engines

In 2020, the Commission adopted state-wide, state-only requirements to minimize emissions from natural gas-fired reciprocating internal combustion engines greater than or equal to 1,000 horsepower (hp). At that time, the Commission requested that the Division consider evaluating strategies to increase the electrification of engines, lower emissions standards for engines, and possible controls applicable to smaller engines. In response to this directive and to further address NO_x emissions affecting Colorado's ability to meet the ozone NAAQS, as well as other state goals, the Commission adopted additional NO_x emission limits for natural gas-fired engines greater than or equal to 100 hp and diesel engines greater than or equal to 500 hp.

For engines placed in service, modified, or relocated after January 30, 2024, the Commission adopted, generally, more stringent NO_x standards. The Commission also intends that any engines subject to a more stringent standard under a permit must still comply with that more stringent limit. The Commission adopted varying timing requirements for owners or operators to meet the emission standards, based on the location of subject engines inside and outside of the 8-hour ozone control area. Owners or operators with any natural gas-fired engines in the 8-hour ozone control area are subject to a more aggressive timeline, which requires 100% of engines inside the 8-hour ozone control area to meet the emission standards by May 1, 2027, and 100% of engines outside the 8-hour ozone control area meet the emission standards by May 1, 2029. Operators with no engines inside the 8-hour ozone control area must follow the second timeline and meet the standards of at least 20% of engines each year from 2024 to 2029. Owners and operators of subject diesel and dual-fuel engines statewide are subject to a different phase in schedule of 50% by May 1, 2027 and 100% by May 1, 2029. This phase-in schedule was adopted to allow operators with very small fleets, potentially a single engine, adequate time to plan for retrofits or replacements of these engines. The Commission adopted requirements for owners and operators to submit permit applications to incorporate the applicable emissions standards under Section I.D.6.b. For engines that must submit a general construction permit modification application or a Title V minor modification application pursuant to Section I.D.6.b.(vi)(B), the Commission intends that the emission limits in the applicable permit existing as of the date of submittal of the permit modification will continue to be the enforceable emission limits until the applicable compliance deadline established in Section I.D.6.b. (vii) unless the permit modification application requests the emission limits in Section I.D.6.b. be the enforceable limits earlier than the compliance deadline established in Section I.D.6.b.(vii). In the event that the Division encounters delays in the Division's permitting process for timely, complete permit applications, the Commission intends that the Division will extend the compliance timelines for retrofits, replacements, and performance testing as necessary. The intent of Section I.D.6.a.(iv) "one-time only replacement" applies to a specific engine at a specific site i.e. each specific engine that was in service as of January 30, 2024 at a site may only be replaced one time.

The Commission understands a small subset (~15 engines statewide) of lean burn engines placed in service, modified, or relocated on or before January 30, 2024, may not be able to feasibly obtain the NO_x emission standard in Section I.D.6.b.(ii) (referencing the emissions standards in Table 5). To address this issue, the Commission has provided a mechanism through which owners or operators of those engines can apply to the Division for an alternative NO_x emission standard if the owner or operator can demonstrate that it is not technically or economically feasible to comply with the proposed NO_x emission standard in Section I.D.6.b.(ii). The Division must grant an alternative emission standard where the Division determines that a satisfactory source-specific demonstration has been made. In adopting this provision, it is not the Commission's intent to require RACT in attainment areas (other than as required by Regulation Number 3, Part B, Section III.D.2.); rather, the Commission intends that the Division apply a RACT-like analysis in determining an appropriate alternative emission standard.

In evaluating economic infeasibility as part of the source-specific demonstration, the Division must consider (1) the cost-effectiveness (in cost per ton of pollutant reduced) of undertaking efforts to achieve the standard using generally accepted methods for determining cost per ton reduced and (2) recent and relevant cost-effectiveness thresholds used by the Commission and/or Division with consideration that the source is located in an ozone attainment area. The Division will set an appropriate alternative emission standard by applying the RACT standard (i.e., control technology that will achieve the maximum degree of emission control that a particular source is capable of meeting and that is reasonably available considering technological and economic feasibility). The Commission does not intend to make alternative NO_x emission standards available to engines located in northern Weld County or the 8-Hour ozone control area.

The Commission intends that the emission standards in Table 5 are a gram per horsepower-hour (g/hp-hr) limit based on appropriate averaging times. The Commission also intends that operators demonstrate compliance with the certification and recordkeeping requirements through the performance testing results required by Section I.D.6.c. and the portable analyzer results obtained in accordance with Section I.D.6.d., using the appropriate averaging times. Owners and operators that are subject to more frequent performance testing as part of an existing permit condition must continue to comply with any applicable permit requirement.

The Commission understands that the affected engines in the midstream sector will be subject to a future scheduled rulemaking based on recommendations of the Midstream Steering Committee (MSC) per a regulatory process the Commission adopted in December 2021. The result of the MSC will be a rulemaking in 2024 where operators will commit to reducing GHG emissions from the sector with NO_x reductions being a “co-benefit” as operators will either electrify, shut down, and/or otherwise reduce emissions from some portion of their natural gas-fired engines to meet 2030 GHG emission targets. The Commission does not intend that operators take on the cost of retrofits and replacements under this rule just to later either replace an engine with an electric unit or to wholly remove an engine from service. However, because the Commission cannot forecast the outcome of the 2024 rulemaking, it directs the Division to evaluate, in consultation with midstream operators and other stakeholders, if Regulation Number 26 should be opened concurrently with the 2024 MSC rulemaking timeline to address any conflicts between this rule and the 2024 MSC proposed rules that will be developed by the Division.

The Commission understands that the Division currently collects data on engines that operate at <100 HP as part of the Oil and Natural Gas Annual Emission Inventory Reporting (ONGAIER) data system on an annual basis. The Commission directs the Division to evaluate the existing ONGAIER dataset related to these engines and determine whether there are technically and economically feasible emission control strategies that should be considered by the Commission in a future rulemaking.

Major Source RACT

Due to the reclassifications to severe and moderate, Colorado must submit revisions to its SIP to address the Clean Air Act’s (CAA) ozone nonattainment area requirements, as set forth in CAA §§ 172, 182(b), 182(d), and the final SIP Requirements Rules. Severe SIPs must include provisions that require the implementation of RACT for major sources of VOC and/or NO_x (i.e., sources that emit or have the potential to emit 25 tpy or more) and for each category of VOC sources covered by a Control Technique Guideline (CTG) for which Colorado has sources in the nonattainment area.

Therefore, to address the severe nonattainment area requirements under CAA § 182(d), the Commission adopted revisions to Regulation Number 26 to include RACT requirements in Colorado’s ozone SIP for 25 tpy major sources of VOC and/or NO_x including expanding the foam manufacturing operations. In response to EPA concerns and limited disapproval, the Commission also adopted revised requirements for process heaters, landfill and biogas engines, a coil coating facility, and periodic reporting.

Foam Manufacturing

In response to the DM/NFR being reclassified to severe nonattainment under the 2008 ozone NAAQS the Commission adopted revisions to Regulation 26 to expand VOC control requirements initially adopted in December 2020 to foam manufacturing operations with VOC emissions greater than or equal to 25 tons per year (tpy). These provisions include work practice, monitoring, and recordkeeping requirements for foam manufacturing operations.

Landfill and Biogas Fuel Fired Engines

In 2020, the Commission expanded the NO_x emission limit requirements for compression ignition reciprocating internal combustion engines (RICE) and combustion process adjustment requirements for stationary RICE to landfill and biogas fired engines at major sources (50 tpy). Considering the potentially subject sources at that time, the Commission adopted the 2.0 g/hp-hr NO_x emission limit in EPA's NSPS JJJJ for landfill/digester gas fired engines. In reviewing the adopted requirements and considering the remaining subject engines, EPA has raised concerns with the NO_x emission limit and testing requirements. The Commission re-reviewed the subject engines, several having since been removed from service, and is adopting a revised NO_x emission limit of 1.5 g/hp-hr for these engines. The Commission also expanded the periodic performance testing requirements currently applicable to other subject major source engines.

Process Heaters

In 2021, the Commission adopted additional requirements for refinery fuel fired process heaters at major NO_x sources. In response to EPA's comments and concerns and to allow for further evaluation, the Commission removed the NO_x emission limits for these heaters. The process heaters will continue to be subject to combustion process adjustment requirements, as they have been since the 2021 revisions, and performance testing requirements. The Commission directs the Division to return to the Commission with proposed revisions in the future related to these heaters following further useful input from EPA, if necessary and appropriate.

Golden Aluminum (coil coating facility)

In 2020, the Commission evaluated the NO_x emission points at Golden Aluminum as it became a major source of NO_x emissions under the 50 tpy serious major stationary source threshold. Golden Aluminum is a coil coating operation and, therefore, subject to the coil coating provisions in Regulation Number 25 (formerly in Regulation Number 7, Part C), which were adopted many years ago based on the recommendations in EPA's corresponding coil coating CTG. EPA is taking issue with Colorado's reliance on EPA's long-standing interpretation and position that states may utilize EPA's control techniques guidelines (CTG) recommendations and definition of the subject VOC source category when revising the state's SIP to include provisions that require the implementation of RACT for that particular VOC source category (i.e., SIP RACT). Specifically, EPA has proposed a limited disapproval because Colorado did not evaluate VOC emission points at this coil coating operation that were also not addressed in EPA's coil coating CTG. Therefore, the Commission adopted a requirement for Golden Aluminum to conduct and submit a RACT analysis to the Division for further evaluation of the VOC-emitting points at issue in EPA's proposed disapproval.

The Commission also made typographical, grammatical, and formatting corrections throughout the regulation.

Incorporation by Reference

The Commission will update regulatory references as needed as opportunities arrive.

Additional Considerations

Colorado must revise Colorado's ozone SIP to address the severe ozone nonattainment area requirements. The CAA does not expressly address all of the provisions adopted by the Commission. Rather, federal law establishes the ozone NAAQS and requires Colorado to develop a SIP adequate to attain the NAAQS. Therefore, the Commission adopted certain revisions to Regulation Number 26 to satisfy Colorado's nonattainment area obligations and further achieve reductions of ozone precursor emissions. These revisions do not exceed or differ from the federal act due to state flexibility in determining what control strategies to implement to reduce emissions. However, where the proposal may differ from federal rules under the federal act, in accordance with § 25-7-110.5(5)(b), CRS, the Commission determines:

- (I) The revisions to Regulation Number 26 address foam manufacturing, landfill biogas fuel fired engines, a coil coating operation, and process heaters. NSPS T, MACT DDDDD, MACT ZZZZ, and MACT SSSS may also apply to and the above listed equipment and operations. However, the revisions to Regulation Number 26 apply on a broader basis.
- (II) The federal rules discussed in (I) are primarily technology-based in that they largely prescribe the use of specific technologies or work practices to comply.
- (III) The CAA establishes the 2008 and 2015 ozone NAAQS and requires Colorado to develop SIP revisions that will ensure attainment of the NAAQS. The ozone NAAQS was not determined taking into account concerns unique to Colorado. Similarly, EPA develops NSPS or NESHAP considering national information and data, not Colorado specific issues or concerns. In addition, Colorado cannot rely exclusively on a federally enforceable permit or federally enforceable NSPS or NESHAP to satisfy Colorado's ozone nonattainment area RACT obligations. Instead, Colorado can adopt applicable provisions into its SIP directly, as the Commission has done here.
- (IV) In addition to the 2008 NAAQS, Colorado must also comply with the lower 2015 ozone NAAQS. These current revisions may improve the ability of the regulated community to comply with new requirements needed to attain the lower NAAQS insofar as RACT analyses and efforts conducted to support the revisions adopted by the Commission may prevent or reduce the need to conduct additional RACT analyses for the more stringent NAAQS.
- (V) EPA has established Colorado's SIP RACT implementation deadlines. There is no timing issue that might justify changing the time frame for implementation of federal requirements.
- (VI) The revisions to Regulation Number 26 strengthen Colorado's SIP. These sections currently address emissions from foam manufacturing, landfill and biogas fuel fired engines, a coil coating operation, and process heaters, while allowing for continued growth of Colorado's industry.
- (VII) The revisions to Regulation Number 26 establish reasonable equity for owners and operators subject to these rules by providing the same standards for similarly situated and sized sources.
- (VIII) If EPA does not approve Colorado's SIP, EPA may promulgate a Federal Implementation Plan; thus potentially determining RACT for Colorado's sources. This outcome may subject others to increased costs.
- (IX) Where necessary, the revisions to Regulation Number 26 include minimal monitoring, recordkeeping, and reporting requirements that correlate, where possible, to similar federal or state requirements.
- (X) Demonstrated technology is available to comply with the revisions to Regulation Number 26. Some of the revisions expand upon requirements already applicable. The revisions concerning major sources of NO_x generally reflect current emission controls and work practices.

- (XI) As set forth in the Economic Impact Analysis, the revisions to Regulation Number 26 will reduce emissions in a cost-effective manner.
- (XII) Alternative rules could also provide reductions in ozone, VOC, and NO_x to help to attain the NAAQS. However, a no action alternative would very likely result in an unapprovable SIP.

Findings of Fact

To the extent that § 25-7-110.8, C.R.S., requirements apply to this rulemaking, and after considering all the information in the record, the Commission hereby makes the determination that

- (I) These rules are based upon reasonably available, validated, reviewed, and sound scientific methodologies, and the Commission has considered all information submitted by interested parties.
 - (II) Evidence in the record supports the finding that the rules shall result in a demonstrable reduction of greenhouse gas and VOC emissions.
 - (III) Evidence in the record supports the finding that the rules shall bring about reductions in risks to human health and the environment that justify the costs to implement and comply with the rules.
 - (IV) The rules are the most cost-effective alternative to achieve the necessary reduction in air pollution and provide the regulated entity flexibility.
 - (V) The selected regulatory alternative will maximize the air quality benefits of regulation in the most cost-effective manner.
-

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Tracking number: 2023-00639

Opinion of the Attorney General rendered in connection with the rules adopted by the
Air Quality Control Commission

on 12/15/2023

5 CCR 1001-30

REGULATION NUMBER 26 Control of Emissions from Engines and Major Stationary Sources

The above-referenced rules were submitted to this office on 12/20/2023 as required by section 24-4-103, C.R.S. This office has reviewed them and finds no apparent constitutional or legal deficiency in their form or substance.

January 02, 2024 11:28:57

A blue ink signature of Philip J. Weiser, written in a cursive style.

Philip J. Weiser
Attorney General
by Kurtis Morrison
Deputy Attorney General

Permanent Rules Adopted

Department

Department of Public Health and Environment

Agency

Health Facilities and Emergency Medical Services Division (1011, 1015 Series)

CCR number

6 CCR 1015-3

Rule title

6 CCR 1015-3 EMERGENCY MEDICAL SERVICES 1 - eff 02/14/2024

Effective date

02/14/2024

DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
Health Facilities and Emergency Medical Services Division
EMERGENCY MEDICAL SERVICES 6 CCR 1015-3

CHAPTER FOUR – RULES PERTAINING TO LICENSURE OF GROUND AMBULANCE SERVICES
Adopted by the Board of Health on December 20, 2023. Effective July 1, 2024.

(Publication Instructions: Strike existing all language below title block for 6 CCR 1015-3, Chapter Four – Rules Pertaining to Licensure of Ground Ambulance Services and replace with new text below)

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Section 1 – Purpose and Scope

- 1.1 These rules are promulgated pursuant to § 25-3.5-308, C.R.S. They are consistent with §§ 25-3.5-301(3), 305, 306, 314, 315, 317, and 318, C.R.S.
- 1.2 These rules will become effective on July 1, 2024.

Section 2 – Definitions

- 2.1 Administrator: For purposes of these rules, the term “administrator” means a person who the ambulance service identifies to operate the ambulance service and designates to be responsible for the day-to-day operations of a licensed ambulance service.
- 2.2 Advanced Life Support (ALS): Means the provision of care by EMS providers who are licensed or certified as an Advanced EMT, EMT-Intermediate or Paramedic by the Department in an ambulance that is staffed and equipped with appropriate oversight to provide ALS services pursuant to Sections 12 and 13 of these rules.
- 2.3 Ambulance: Any licensed ground vehicle especially constructed or modified and equipped, intended to be used and maintained or operated by, ambulance services for the transportation, upon the streets and highways of this state, of individuals who are sick, injured, or otherwise incapacitated or helpless.
- 2.4 Ambulance Service: The furnishing, operating, conducting, maintaining, advertising, or otherwise engaging in or professing to be engaged in the transportation of patients by ambulance. Taken in context, it also means the person so engaged or professing to be so engaged.-
- 2.5 Ambulance Service License: A legal document issued to an ambulance service by the Department to an applicant that meets the requirements for licensure to operate an ambulance service as defined by these rules.
- 2.6 Authorization to Operate or Authorized to Operate as set forth in Section 16 of these rules: A local authorizing authority's approval of or act of approving an ambulance service to operate within the jurisdiction of the local authorizing authority. Licensed ambulance services are authorized to operate in a county or city-and-county if the local authorizing authority opts out of participating in the issuance of authorizations to operate an ambulance service.
- 2.7 Basic Life Support (BLS): Means the provision of care by EMS providers who are licensed or certified as an emergency medical technician (EMT) by the Department in an ambulance that is staffed and equipped with appropriate oversight to provide BLS services pursuant to Sections 12 and 13 of these rules.
- 2.8 Behavioral Health: As used in these rules, refers to an individual's mental and emotional well-being and actions that affect an individual's overall wellness. Behavioral health issues and disorders include substance use disorders, mental health disorders, serious psychological distress, serious mental disturbance, and suicide and range from unhealthy stress or subclinical conditions to diagnosable and treatable diseases.

- 2.9 Contractor: Means a worker, under contract, who provides transport, treatment, or operational services for the ambulance service for an hourly fee or on a per project basis. For purposes of these rules, "contractor" does not include external business entities such as corporations, partnerships, and limited liability corporations that ambulance services hire in the course of business to provide independent professional services.
- 2.10 Department: The Colorado Department of Public Health and Environment.
- 2.11 EMS Medical Director (hereinafter referred to as "medical director"): For purposes of these rules, means a physician licensed in Colorado and in good standing who authorizes and directs, through medical protocols, guidelines, or standing orders, EMS providers of an ambulance service or the performance of students-in-training enrolled in Department-recognized EMS education programs, graduate AEMTs, or graduate Paramedics, and who is specifically identified as being responsible to assure the competency of the performance of those acts by such EMS providers as described in the physician's quality assurance program.
- 2.12 EMS Compact: means the multi-state privilege to practice for EMS personnel established by the Recognition of EMS Personnel Licensure Interstate Compact (REPLICA) in Section 24-60-3502, C.R.S.
- 2.13 Facility: For the purpose of these rules, means any entity required to be licensed by the Department pursuant to Section 25-1.5-103(1)(a)(I)(A), C.R.S. A facility also includes a licensed behavioral health entity.
- 2.14 Inspection: An assessment by the Department of the ground ambulance service's compliance with all applicable statutes and regulations governing licensed ambulance services. An inspection may include an onsite inspection of the service's medical equipment and ambulances to assure compliance with these rules and to protect the public health and safety.
- 2.15 Interfacility Transport: For purposes of these rules, means the movement of a patient from one licensed health-care facility to another licensed health-care facility.
- 2.16 License Application Review: Upon application for initial licensure, licensure renewal, or change of ownership, the Department's assessment of the applicant ground ambulance service's ability to meet the requirements for licensure as set forth in these rules.
- 2.17 Licensee: The person, entity, or agency that is granted a license to operate a ground ambulance service and that bears legal responsibility for compliance with all applicable federal and state statutes and regulations. For purposes of this chapter, the term licensee is synonymous with the term "owner or operator." If an entity is the licensee, it must provide the Department with the name of the executive in charge of the overall management of the licensee-private entity's service area(s) whose ultimate responsibility includes the licensee-private entity's compliance with all applicable federal and state statutes and regulations.
- 2.18 Local Licensing Authority: Referred to as "local authorizing authority" in these rules, means the governing body of a city-and-county or the board of county commissioners in a county in the state that authorizes state-licensed ambulance services to operate on a regular basis within the jurisdiction.
- 2.19 Medical Direction: As used in these rules, medical direction has the same meaning as set forth in Section 25-3.5-103(8.8), C.R.S., and Section 2.32 of 6 CCR 1015-3, Chapter Two.-

- 2.20 Medical Protocol: A written standard or guideline for patient medical assessment and management, approved and authorized by the ambulance service's medical director.
- 2.21 Operate on a Regular Basis: A patient transport from a point originating in a county or city-and-county that satisfies one or more of the conditions specified in Section 16.2.1.
- 2.22 Owner or Operator: Means the person, entity, or agency in whose name the license is issued. For the purposes of this chapter, an owner or operator may also serve as the administrator of a licensed ground ambulance service if qualified, as required by these rules.
- 2.22.1 If the license is issued in the name of a private entity that is owned by one (1) or more individuals, the owner or operator means the person or persons who have a direct or indirect ownership interest in the private entity and who bears legal responsibility for compliance with all applicable federal and state statutes and regulations.
- 2.22.2 If the license is issued in the name of a private entity that is owned by domestic and/or foreign entities as defined in Sections 7-90-102(13) & (23), C.R.S., the owner or operator means the executive in charge of the overall management of the private entity's service area(s) whom the private entity has designated as bearing ultimate responsibility for the private entity's compliance with all applicable federal and state statutes and regulations.
- 2.22.3 If the license is issued in the name of a governmental agency, including special districts, the owner or operator means the individual who is appointed, elected, or employed to direct and oversee the overall day-to-day management of the ambulance service and who bears legal responsibility for compliance with all applicable federal and state statutes and regulations.
- 2.23 Patient Care Report: For purposes of these rules, "patient care report" is the documentation of interactions with and of services performed for the patient by, the ambulance service. Patient care reports include the data as required in 6 CCR 1015-3, Chapter Three - Rules Pertaining to Emergency Medical Services Data and Information Collection and Record Keeping.
- 2.24 Permit: The authorization issued by the Department with respect to an ambulance used or to be used to provide ambulance service in the state.
- 2.25 Prehospital Setting: Means one of the following settings in which an emergency medical service provider performs patient care, which care is subject to medical direction by a medical director:
- 2.25.1 At the site of an emergency;
- 2.25.2 During emergency transport; or
- 2.25.3 During interfacility transport.
- 2.26 Quality Assurance Program: For purposes of these rules, a quality assurance program means a process undertaken by the ambulance service medical director consistent with the Rules Pertaining to EMS Practice and Medical Director Oversight at 6 CCR 1015-3, Chapter Two, used to objectively, systematically, and continuously monitor, assess, and improve the quality and appropriateness of care provided by the EMS providers operating on an ambulance service. For purposes of these rules, a quality management program, as defined in Section 25-3.5-903(4), C.R.S., also constitutes a quality assurance program.

- 2.27 Regional Emergency Medical and Trauma Services Advisory Council (RETAC) – The representative body appointed by the governing bodies of counties or cities-and-counties for the purpose of providing recommendations concerning regional area emergency medical and trauma service plans for such counties or cities and counties.
- 2.28 Rescue Unit: Means any organized group chartered by this state as a corporation, not for profit, or otherwise existing as a nonprofit organization whose purpose is the search for and the rescue of lost or injured persons and includes, but is not limited to, such groups as search and rescue, mountain rescue, ski patrols (either volunteer or professional), law enforcement posses, civil defense units, or other organizations of governmental designation responsible for search and rescue.
- 2.29 Reserve Ambulance: Means a permitted ambulance that is not currently used by an ambulance service to provide patient care, but in accordance with a licensed ambulance service's policies may be equipped and staffed on short notice to meet the requirements in Sections 12 and 13.
- 2.30 Secure Transportation Services: Means urgent transportation services provided to individuals experiencing a behavioral health crisis as defined in Section 25-3.5-103(11.4), C.R.S.
- 2.31 Service Area: Means a geographically defined area in which an ambulance service has been authorized to provide ambulance transport services for calls originating therein. Service area can include a multi-county geographical area as long as the ambulance service is authorized to operate in every county or city-and-county within that defined geographical area.
- 2.32 Specialized Services: Means services other than 911 response, interfacility transport, or critical care services, and may include, but are not limited to, stroke care, bariatric care, and pediatric care.
- 2.33 Waiver: A Department-approved exception to these rules granted to a licensed ambulance service. This is also referred to as an administrative waiver in these rules.

Section 3 – Department Issuance of Licenses and Ambulance Permits

- 3.1 On and after July 1, 2024, a person, entity, or agency shall not operate or maintain an ambulance or ambulance service without a license and vehicle permits issued by the Department and, if applicable, without authorization to operate from the governing body of a city-and-county or the Board of County Commissioners of the county or city-and-county in which the ambulance service operates or seeks to operate.
- 3.2 Department License Required
- 3.2.1 On and after July 1, 2024, and except as provided in Section 3.3 of these rules, a person, entity, or agency shall not operate or maintain an ambulance service, public or private, to transport a sick or injured person from any point within Colorado to any point within or outside Colorado unless that person, entity, or agency holds a valid license issued by the Department.
- 3.2.2 A person, entity, or agency that operates an ambulance service without a license issued by the Department commits a petty offense and shall be punished by fine or imprisonment as provided in Section 18-1.3-503(1.5), C.R.S.
- 3.3 Exemptions from Licensure, Permit, and Authorization Requirements

- 3.3.1 Vehicles used for the transportation of persons injured at a mine when the personnel used on the vehicles are subject to the mandatory safety standards of the federal Mine Safety and Health Administration, or its successor agency.
- 3.3.2 Vehicles used to evacuate patients from areas inaccessible to a permitted ambulance. Vehicles used in this capacity may only transport patients to the closest practical point of access to a permitted ambulance or medical facility.
- 3.3.3 Vehicles rendering services as an ambulance during a major catastrophe or emergency when ambulances with an authorization to operate in the county and city-and-county in which the major catastrophe or emergency occurred or is occurring are insufficient to render the ambulance services required in the county or city-and-county.
- 3.3.4 An ambulance based outside of the state that is transporting a patient into the state.
- 3.3.5 Pursuant to Section 25-3.5-314(2)(d), C.R.S., vehicles used or designed for the scheduled transportation of convalescent patients, individuals with disabilities, or persons who would not be expected to require skilled treatment or care while in the vehicle.
- 3.3.6 Vehicles used solely for the transportation of intoxicated persons or persons incapacitated by alcohol as defined in Section 27-81-102(11), C.R.S., but who are not otherwise disabled or seriously injured and who would not be expected to require skilled treatment or care while in the vehicle.
- 3.3.7 The exceptional emergency use of a privately or publicly owned vehicle, including search and rescue unit vehicles, not ordinarily used in the act of transporting patients.
- 3.4 General Requirements for Department Licensure of Ambulance Services and Permitting of Ambulance Vehicles
 - 3.4.1 If on June 30, 2024, an ambulance service has a valid license issued by a county or city-and-county for each ambulance used, the Department shall issue an initial state license to the ambulance service and initial state permits for each ambulance used that will remain valid for up to two (2) years.
 - 3.4.2 For all ambulance services that do not have a valid license issued by a county or city-and-county on June 30, 2024, an owner or operator must file for and obtain an initial ambulance license and ambulance permits from the Department prior to beginning operations.
 - 3.4.3 An ambulance service license or ambulance permit may not be assigned, sold or otherwise transferred.
 - 3.4.4 Any vehicle that operates as an ambulance shall be permitted by the Department before it can be identified as an ambulance. Each ambulance shall:
 - A) Make its permit accessible upon request; and
 - B) Clearly display on the vehicle the name of the ambulance service as reported to the Department in the application.
- 3.5 State Licensing Process

3.5.1 To become licensed and maintain licensure by the Department, every ambulance service must comply with all applicable laws and regulations that are required to operate and maintain an ambulance service in Colorado, as well as all other applicable federal and state laws and regulations.

A) Section 14 of these rules will not go into effect until July 1, 2026.

3.5.2 To obtain an initial license or to renew an existing license, the owner or operator of an ambulance service ("applicant") shall submit to the Department:

A) A completed application form;

B) An application fee as set forth by the Department in Section 4 of these rules;

C) The names, addresses, telephone numbers, and e-mail contact information for the medical director[s] of the services;

D) A complete list of equipment carried on each permitted ambulance per medical protocols and policies;

E) Upon the Department's request, copies of the ambulance service's written policy and procedure manual, operational or medical protocols or guidelines, or other documentation the Department may deem necessary;

F) Proof of minimum vehicle insurance coverage as required by Section 10-4-619, C.R.S., and defined by Section 42-7-103 (2), C.R.S., with the Department identified as the certificate holder;

G) Proof of worker's compensation consistent with the Colorado Worker's Compensation Act, Title 8, Articles 40-47, C.R.S.;

H) Proof of general liability insurance coverage or a surety bond in an amount not less than the amount calculated in accordance with Sections 24-10-114(1)(a) and (1)(b), C.R.S.;

I) Compliance with all applicable requirements of Section 3.7 of these rules regarding permits;

J) Its articles of incorporation, articles of organization, partnership agreement, certificate of limited partnership, articles of association, statement of registration, operating agreement, or other document of similar import filed or recorded by or for an entity in the jurisdiction under the law of which the entity is formed, by which it is formed, or by which the entity obtains its status as an entity or the entity or any or all of its owners obtain the attribute of limited liability.

3.5.3 Upon receipt of all required application materials, the Department shall review the applicant's ability to provide ambulance services.

A) The Department may conduct an on-site licensing inspection or other appropriate review to determine whether the ambulance service and its ambulances and reserve ambulances conform with all applicable statutes and regulations.

- B) The Department shall consider the information contained in the ambulance service's application and may request access to and consider other information concerning the ambulance service's operation, including without limitation, aspects related to patient care, such as:
- 1) The applicant's previous compliance history, if applicable;
 - 2) The applicant's policies and procedures;
 - 3) The applicant's quality assurance program and other quality assurance documentation as may be appropriate;
 - 4) Credentials of patient care staff, including a list of each individual staff member's current certification and/or licensing credentials at the time the licensure application is submitted;
 - 5) Interviews with staff; and
 - 6) Other documents deemed appropriate by the Department.

3.5.4 The applicant shall provide, upon request, access to such individual patient records as the Department requires for the performance of its licensing and regulatory oversight responsibilities.

3.5.5 The applicant shall provide, upon request, access to or copies of reports and information required by the Department for the performance of its licensing and regulatory oversight responsibilities.

3.5.6 The Department shall not release to any unauthorized person any information defined as confidential under state law or the Health Insurance Portability and Accountability Act of 1996, codified at 42 U.S.C. Section 300gg, 42 U.S.C. 1320d *et seq.*, and 29 U.S.C. Section 1181, *et seq.*

3.5.7 An ambulance service license expires two (2) years from the Department's issuance of the license.

3.6 Fingerprint-based Background Check for License Applicant Owner or Operator

3.6.1 When submitting an application for an initial or renewal license, the owner or operator of an ambulance service shall submit with the license application a complete set of the owner's or operator's fingerprints to the Colorado Bureau of Investigation for the purpose of conducting a state and national fingerprint-based background check.

3.6.2 When a currently licensed ground ambulance service undergoes a change of ownership or change of operator, each prospective new owner or operator shall, within 10 (ten) days after a change in ownership or operator, submit along with the license application required in Section 3.5.2 of these rules, a complete set of the owner's or operator's fingerprints to the Colorado Bureau of Investigation for the purpose of conducting a state and national fingerprint-based background check.

3.6.3 Each owner or operator of an ambulance service is responsible for paying the fee established by the Colorado Bureau of Investigation for conducting the fingerprint-based background check to the Bureau.

3.7 Ambulance Permit Process

- 3.7.1 A licensed ambulance service shall not operate or maintain any vehicle it uses or intends to use as an ambulance or reserve ambulance, as defined in these rules, unless each such vehicle has been issued a valid permit by the Department.
- 3.7.2 For every ambulance that a licensed ambulance service uses or intends to use as an ambulance or reserve ambulance, the owner or operator of an ambulance service ("applicant") shall apply for a permit from the Department on a form specified by the Department. A permit application shall not be complete unless the applicant provides all requested information to the Department concerning the ambulance[s] and/or reserve ambulance[s] it seeks to permit, including but not limited to:
- A) The vehicle identification number of the ambulance to be permitted;
 - B) Documented proof that all ambulance service ambulances are manufactured by a final stage or completed vehicle organization that has submitted all information to the National Highway Traffic Safety Administration (NHTSA) as required by 49 C.F.R. Part 566, 49 C.F.R. Part 567, and 49 C.F.R. Part 568;
 - C) Documented proof that all ambulance service ambulances are designed, built, and equipped in compliance with one of the nationally recognized ambulance standards, such as CAAS-GVS, Triple-K, or NFPA, and in accordance with applicable federal, state, and local regulations;
 - D) Documented proof that the ambulance is maintained and operating in good working order and has passed a mechanical safety inspection by a qualified mechanic pursuant to the service's preventative maintenance policy within, at minimum, the last twelve months;
 - E) Documented proof that the ambulance for which the permit is sought is authorized by the Colorado Department of Motor Vehicles as an emergency vehicle, pursuant to Section 42-4-108(5), C.R.S.;
 - F) The ambulance service policy that establishes the minimum equipment list for each ambulance that it seeks to permit; and
 - G) The applicable fee, as set forth in Section 4 of these rules.
- 3.7.3. Upon the issuance of a permit, the licensed ambulance service shall ensure the permit is located in the ambulance that is identified by the corresponding vehicle identification number and is available for inspection at all times.
- 3.7.4 An ambulance permit expires two (2) years from issuance of the permit.
- 3.7.5 A licensed ambulance service shall notify the Department within 30 days if the ambulance service sells, disposes of, or otherwise permanently removes a validly-permitted ambulance or reserve ambulance from operation as part of its inventory/fleet.
- 3.7.6 Any licensed ambulance service that buys, leases, or acquires possession of one (1) or more ambulances or reserve ambulances during its licensure period shall not operate or use any such ambulance for patient transport of any kind until the service has applied for

and received a valid permit for each such ambulance from the Department, as set forth in Section 3.7.2 of these rules.

- A) Temporary permits - The Department may issue a temporary permit to an ambulance service for its use of an ambulance or reserve ambulance under the following circumstances:
 - 1) The ambulance service notifies the Department within seventy-two (72) hours of its unexpected and temporary use of another ambulance service's Colorado-permitted ambulance in order to provide coverage under unforeseen or unanticipated circumstances; or
 - 2) The ambulance service requests the Department's permission to operate an ambulance that is not fully equipped as required by these rules but can establish to the Department's satisfaction that:
 - a) Receipt of the missing equipment is pending; and
 - b) The ambulance service's operation of the ambulance in the interim is safe for staff, patient care, and transportation.
- B) When applying for a temporary permit, the ambulance service shall submit an application for a temporary permit on forms specified by the Department. Submission of this application requires the ambulance service to attest that the ambulance for which the temporary permit is sought complies with Section 3.7.2 of these rules.
- C) The Department may conduct an on-site inspection or other appropriate review to determine whether the ambulance or reserve ambulance for which the ambulance service seeks a temporary permit conforms with all applicable statutes and regulations.
- D) Once issued, a temporary permit will remain valid for up to one hundred eighty (180) calendar days with the following conditions:
 - 1) The Department may renew a temporary permit once only for a period of up to ninety (90) calendar days;
 - 2) The temporary permit is not otherwise renewable or transferable; and
 - 3) The ambulance service shall ensure the temporary permit is located in the ambulance that is identified by the corresponding vehicle identification number, and is available for inspection at all times.

3.7.7 A person, entity, or agency that operates an ambulance without a permit issued by the Department is subject to a civil penalty of:

- A) Up to five hundred dollars (\$500) per violation; or
- B) For each day of a continuing violation, up to five hundred dollars (\$500) per day.

3.8 Provision of secure transportation services by licensed ground ambulances that operate and maintain a validly permitted ambulance in accordance with Section 25-3.5-314, C.R.S., and these

rules may provide secure transportation services to an individual experiencing a behavioral health crisis.

- 3.9 A licensed ground ambulance service that provides community integrated health care services (CIHCS) in addition to medical transport services must also hold a valid CIHCS license from the Department pursuant to 6 C.C.R. 1011-3.

3.10 Provisional License

3.10.1 The Department may issue a provisional license to an applicant for an initial license to operate an ambulance service if:

- A) The applicant is temporarily unable to conform to all the minimum standards required under Title 25, Article 3.5, Part 3, and these rules;
- B) The operation of the applicant's ambulance service will not adversely affect patient care or the health, safety, and welfare of the public; and
- C) The applicant ambulance service demonstrates it is making its best efforts to achieve compliance with all the applicable rules.

3.10.2 A provisional license issued by the Department shall be valid for a period not to exceed ninety (90) calendar days, except that the Department may issue a second provisional license for the same duration and shall charge the same fee set forth in Section 4 of these rules as for the first provisional license. The Department may not issue a third or subsequent provisional license to the applicant, and in no event shall a service be provisionally licensed for a period to exceed one hundred eighty (180) calendar days.

3.10.3 Pursuant to Section 16 of these rules, each service that is issued a provisional license from the Department must also, if applicable, obtain an authorization to operate from the local authorizing authority for each county or city-and-county in which the ambulance service intends to operate.

3.10.4 The applicant shall submit to the Department the applicable provisional fee(s) set forth in Section 4 of these rules.

3.11 License Renewal and Permit Renewal

3.11.1 To renew an existing ambulance service license, permit, or both, the licensee shall submit its application for renewal within ninety (90) calendar days preceding the expiration date, and no later than thirty (30) calendar days prior to the date of the ambulance license and/or permit expiration. At minimum, the licensee shall submit:

- A) The applicable renewal application and fees, as set forth in Section 4 of these rules;
- B) Documented proof that the ambulance is maintained and operating in good working order and has passed a mechanical safety inspection by a qualified mechanic pursuant to the service's preventative maintenance policy within, at minimum, the last twelve (12) months; and
- C) Any further information as required by the Department.

- 3.11.2 A Department-issued ambulance license and/or permit is no longer valid upon the applicable expiration date. The ambulance service that has allowed its license and/or permit to expire shall not:
- A) Hold itself out as a license and/or permit holder; and
 - B) Provide ambulance service or operate any ambulance for any reason, whether or not for compensation, until such time as the Department has issued a new or renewed license and/or permit.
- 3.11.3 When an ambulance service licensee submits an application to renew its license and/or permit, the Department may conduct an inspection of the ambulance service to assure its compliance with these rules.
- 3.11.4 Except as otherwise provided in Section 3.10 of these rules, the Department shall renew a license and/or permit when it is satisfied that the requirements of these rules have been met.
- 3.11.5 If the licensee has made a timely and sufficient application for renewal of the license and/or permit, the existing license and/or permit shall not expire until the Department has acted upon the renewal application.

3.12 Change of Ownership/Management

- 3.12.1 When a currently licensed ambulance service anticipates a change of ownership, the current licensee shall notify the Department within the specified time frame and the prospective new licensee shall submit an application for change of ownership along with the requisite fees as set forth in Section 4 of these rules, as applicable, and documentation within the same time frame. The time frame for submittal of such notification and documentation shall be at least sixty (60) calendar days before a change of ownership involving any ambulance service.
- A) In case of exigent circumstances, an ambulance service may request a waiver of the sixty (60) calendar day requirement set forth above.
- 3.12.2 In general, the conversion of an ambulance service's legal structure, or the legal structure of an entity that has a direct or indirect ownership interest in the ambulance service is not a change of ownership unless the conversion also includes a transfer of at least fifty (50) percent of the licensed ambulance service's direct or indirect ownership interest to one (1) or more new owners.-
- A) However if, for example, the owner of an ambulance service enters into a lease arrangement or management agreement or other operational arrangement whereby the owner retains no authority or responsibility for the operation and management of the ambulance service, the action shall be considered a change of ownership that requires a new license.
- 3.12.3 Each applicant for a change of ownership shall provide information on change of ownership as requested by the Department, including, but not limited to the following:
- A) The legal name of the entity and all other names used by it to provide health care services.

- 1) The applicant has a continuing duty to notify the Department of all name changes at least thirty (30) calendar days prior to the effective date of the change.
 - B) Contact information for the entity including mailing address, telephone and facsimile numbers, e-mail address, and website address, as applicable. -
- 3.12.4 The existing licensee shall be responsible for correcting all rule violations and deficiencies in any current plan of correction before the change of ownership becomes effective. In the event that such corrections cannot be accomplished in the time frame specified, the prospective licensee shall be responsible for all uncorrected rule violations and deficiencies including any current plan of correction submitted by the previous licensee unless the prospective licensee submits a revised plan of correction, approved by the Department, before the change of ownership becomes effective.
- 3.12.5 If the Department issues a license to the new owner, the previous owner shall return its license to the Department within five (5) calendar days of the new owner's receipt of its license.

Section 4 – Fees (Reserved)

Section 5 – Complaints

- 5.1 The Department may investigate a complaint regarding the alleged violation by a licensed ambulance service of the provisions of:
 - 5.1.1 Sections 25-3.5-301, C.R.S., *et seq.*;
 - 5.1.2 These ground ambulance licensing rules;
 - 5.1.3 Rules set forth in 6 CCR 1015-3:
 - A) Chapter One – Rules Pertaining to EMS and EMR Education, EMS Certification or Licensure, and EMR Registration;
 - B) Chapter Two – Rules Pertaining to EMS Practice and Medical Director Oversight; and
 - C) Chapter Three – Rules Pertaining to Emergency Medical Services Data and Information Collection and Record Keeping.
 - 5.1.4 Regulations set forth in 6 CCR 1015-4, Chapter One, State Emergency Medical and Trauma Care System Standards and Chapter Four, Regional Emergency Medical and Trauma Services Advisory Councils.
- 5.2 The Department may also initiate a complaint investigation concerning any act or event that a licensed ambulance service must report to the Department pursuant to Section 9 of these rules - Mandatory Incident Reporting.
- 5.3 Complaints or referrals relating to the quality and conduct of an ambulance service may be made by any person or entity and may be initiated by the Department.
- 5.4 The Department does not have jurisdiction over billing disputes.

- 5.5 Upon receipt of a complaint, the Department may make inquiry as to the validity of such complaint prior to initiating an investigation. If the Department determines that a complaint warrants a more extensive review, it may initiate an investigation to determine if a violation occurred.
- 5.6 Complaints concerning EMS medical directors regulated by the Department pursuant to 6 CCR 1015-3, Chapter Two, shall be reviewed by the Department.
- 5.7 Complaints concerning matters outside of the Department's jurisdiction may be referred to the appropriate entity.
- 5.8 If the Department determines that the complaint does not warrant further review or determines that the complaint is outside of the Department's authority to investigate, the Department will notify the complainant.
- 5.9 Nothing in this section prohibits the Department from conducting a complaint investigation under circumstances it deems necessary.
- 5.10 When the Department has completed its complaint investigation, it shall notify, in writing, the complainant and the licensed ambulance service of the results of any alleged violation of the relevant rules.
- 5.11 When, at the completion of the Department's complaint investigation, it determines that one or more violations of any of the rules set forth in Section 5.1 or of the governing statutes may result in the initiation of an administrative action or a referral to a law enforcement agency or to other regulatory bodies, the Department shall notify in writing:
 - 5.11.1 The primary medical director of the licensed ambulance service of any known violation of the ambulance licensing rules by the ambulance service or known-violations of the ambulance licensing rules by individual medical providers operating on an ambulance service; and
 - 5.11.2 The county or city-and-county in which the complaint arose, and any other county or city-and-county in which the licensed ambulance service is authorized to operate.

Section 6 – Plans of Correction

- 6.1 After any Department inspection or complaint investigation, the Department may request a plan of correction from an ambulance service.
 - 6.1.1 A plan of correction shall be in the format prescribed by the Department and shall include, but not be limited to, the following:
 - A) Identification of the problem(s) with the current activity and what the ambulance service will do to correct each deficiency;
 - B) A description of how the ambulance service will accomplish the corrective action;
 - C) A description of how the ambulance service will monitor the corrective action to ensure the deficient practice is remedied and will not recur; and
 - D) A timeline with the expected implementation and completion date. The completion date is the date that the ambulance service determines it can achieve compliance.

6.1.2 Completed plans of correction shall be:

- A) Submitted to the Department in the form and manner required by the Department;
- B) Submitted within ten (10) calendar days after the date of the Department's delivery of the written notice of deficiencies to the ambulance service, unless otherwise required or approved by the Department; and
- C) Signed by the ambulance service administrator.

6.1.3 The Department has the discretion to approve, modify, or reject plans of correction.

- A) If the plan of correction is accepted, the Department shall notify the ambulance service by issuing a written notice of acceptance within thirty (30) calendar days of receipt of the plan.
- B) If the plan of correction is unacceptable, the Department shall notify the ambulance service in writing, and the service shall re-submit a revised plan of correction to the Department within fifteen (15) calendar days of the date of the written notice.
- C) If the ambulance service fails to comply with the requirements or deadlines for submission of a plan or fails to submit a revised plan of correction, the Department may reject the plan of correction and impose disciplinary sanctions as set forth in Sections 7 or 8 of this rule.
- D) If the ambulance service fails to timely implement the actions agreed to in the plan of correction, the Department may impose disciplinary sanctions as set forth in Sections 7 and 8 of this rule.

Section 7 – License Conditions and Restrictions

7.1 After any Department inspection or complaint investigation, the Department may:

7.1.1 Exercise its lawful authority pursuant to Section 25-3.5-318(4), C.R.S., to impose one or more intermediate restrictions or conditions on a licensed ambulance service.

7.1.2 Require the ambulance service to:

- A) Retain a consultant to address corrective measures;
- B) Be monitored by the Department for a specific period;
- C) Provide additional training to its employees, contractors, volunteers, owners, or operators;
- D) Comply with a directed written plan to correct the violation in accordance with the procedures established pursuant to the requirements set forth in Section 25-27.5-108(2)(b), C.R.S.; or
- E) Pay a civil penalty of up to five hundred dollars (\$500) per violation.

- 7.1.3 The licensed ambulance service may appeal any intermediate restriction or condition, including after submission of an approved written plan, through an informal review process as specified by the Department.
- 7.1.4 If a licensed ambulance service is not satisfied with the result of the informal review or chooses not to seek informal review, no intermediate restriction or condition shall be imposed until after the opportunity for a hearing has been afforded the licensed ambulance service pursuant to Section 24-4-105, C.R.S.

Section 8 – Denial, Revocation, Suspension, or Summary Suspension of Licenses and Vehicle Permits, and Civil Penalties

- 8.1 The Department may deny the license of an ambulance service if:
 - 8.1.1 The applicant is out of compliance with the requirements of Sections 25-3.5-314-318, C.R.S., or the requirements set forth in these rules; or
 - 8.1.2 If the results of a criminal history record check of an owner or operator demonstrate that the owner or operator has been convicted of a felony or a misdemeanor involving conduct that the Department determines could pose a risk to the health, safety, or welfare of ambulance service patients.
- 8.2 The Department may suspend, revoke, or refuse to renew the license of an ambulance service if:
 - 8.2.1 It is out of compliance with Section 25-3.5-301, *et seq.*, C.R.S., or the requirements set forth in these rules; or
 - 8.2.2 The results of a fingerprint-based criminal history record check of an owner or operator demonstrate that the owner or operator has been convicted of a felony or a misdemeanor involving conduct that the Department determines could pose a risk to the health, safety, or welfare of ambulance service patients.
- 8.3 The Department may summarily suspend a license before a hearing in accordance with Section 24-4-104(4)(a), C.R.S.
- 8.4 Notice of Appeal. The Department shall notify the ambulance service of:
 - 8.4.1 The right to appeal the denial, revocation, suspension, summary suspension, or limitation; and
 - 8.4.2 The procedure for appealing Departmental denials, revocations, suspensions, summary suspensions, or limitations, which shall be conducted in accordance with the state Administrative Procedure Act, Section 24-4-101, *et seq.*, C.R.S.
- 8.5 Except as provided in Section 8.3 of these rules, the Department shall conduct a hearing in accordance with Article 4 of Title 24 before it takes final action to suspend, revoke, or to refuse renewal of a license.
- 8.6 An owner or operator of an ambulance service or other person who violates Section 25-3.5-301, *et seq.*, C.R.S., or a provision of these rules, or who operates without a valid license, is subject to a civil penalty assessed by the Department of:
 - 8.6.1 Up to five hundred dollars (\$500) per violation; or

- 8.6.2 For each day of a continuing violation, up to five hundred dollars (\$500) per day.
- 8.6.3 If the Department assesses civil penalties against a licensed ambulance service pursuant to Section 3.7.7, Section 7.1, and/or Section 8.6 of these rules, the Department shall:
- A) Provide the ambulance service with notice and an opportunity for hearing pursuant to Section 24-4-105, C.R.S.; and
 - B) Upon request of the ambulance service, the Department shall grant a stay of payment of the civil penalties until final disposition of the intermediate restrictions or conditions imposed.

Section 9 – Mandatory Incident Reporting Requirements For Licensees

9.1 Mandatory incidents shall be reported to the Department as follows:

- 9.1.1 Upon the ambulance service's discovery that any of the following procedural incidents has occurred, the ambulance service administrator shall notify the Department of the incident as soon as practicable, but no later than seven (7) calendar days following its discovery, in the form and format specified by the Department. Upon notification, the Department may contact the ambulance service as needed.
- A) Any final agency action against the ambulance service by any federal or state entity related to substandard patient care, health care fraud, or the ambulance service's Drug Enforcement Agency (DEA) license.
 - B) Any civil judgment or criminal conviction in a case brought by federal, state, or local authorities that involves the operation, management, ownership of an ambulance service and contains allegations related to substandard patient care, health care fraud, or moral turpitude. a guilty verdict, a plea of guilty, or a plea of nolo contendere (no contest) accepted by the court is considered a conviction.
 - C) Any instance in which an EMS provider is terminated or suspended by the ambulance service based on the good cause rules set forth in 6 CCR 1015-3, Chapter One.
 - D) Any suspension or revocation of a medical director's license to practice by the Colorado Medical Board.
 - E) The unexpected or untimely separation of a medical director from an ambulance service whether voluntary or involuntary. All other separations or transitions must be reported by the medical director pursuant to 6 CCR 1015-3, Chapter Two.
- 9.1.2 Within 90 days of the ambulance service's discovery that any of the incidents listed within this 9.1.2 may have occurred, the ambulance service and medical director shall review the incident through the ambulance service's quality assurance program to determine if the incident is one or more of the following reportable incidents, and if so, report to the Department no later than the end of the 90-day period, consistent with 9.1.3 below.
- A) Any incident during response or while providing patient care in which an employee, contractor, or volunteer of the ambulance service knowingly:

- 1) Commits physical assault against another person pursuant to Article 3 of Title 18, C.R.S.; or
- 2) Commits sexual assault, pursuant to Article 3 of Title 18, C.R.S. As used here, "sexual assault" includes:
 - a) Any improper sexual contact, touching, intrusion, or penetration that an ambulance service employee, contractor, or volunteer inflicts upon another person; or
 - b) Any instance in which an EMS provider, while purporting to offer a medical service, engages in treatment or examination of a patient for other than a bona fide medical purpose or in a manner substantially inconsistent with reasonable medical practices.
- B) Any incident involving the commission of patient abuse, including the willful infliction of injury, unreasonable confinement, intimidation, or punishment, with resulting physical harm, pain, or mental anguish; or patient neglect, including the failure to provide goods and services necessary to attain and maintain physical and mental well-being by the ambulance service or its employees, contractors, or volunteers.
- C) Any unauthorized appropriation or possession of medications, supplies, equipment, money, or personal items.
- D) The response to an incident, or treatment of a patient, by an ambulance service's employees, contractors, or volunteers while impaired by the use of alcohol or drugs.
- E) Any instance of care provided by someone impersonating a licensed healthcare provider, including someone practicing without a valid certification, license, or privilege to practice.
- F) The death or injury of an occupant of an ambulance that is licensed and permitted by the Department and is a direct result of a motor vehicle collision occurring during response or transport by the ambulance service.
- G) Administration of an adulterated or contaminated drug, device, or biologic provided by the ambulance service.
- H) The following incidents that lead to injury, illness, or death to a patient not ordinarily expected as a result of the patient's condition:
 - 1) A medication error or medical act error;
 - 2) An invasive procedure performed on the wrong site;
 - 3) The use or function of a device in which the device is used in a manner other than as intended or approved by medical direction; or
 - 4) The use of physical restraints or chemical restraints; or

- 5) Patient suicide or attempted suicide that occurs during the provision of patient care.

9.1.3 Incident Reporting Process

- A) Upon determination through the quality assurance program that an incident is reportable pursuant to Section 9.1.2, the ambulance service shall submit a report to the Department no later than ninety (90) calendar days after discovery of the potential incident that:
 - 1) Describes the incident review;
 - 2) Identifies whether additional corrective measures are necessary to prevent reoccurrence of the reported incident; and
 - 3) Specifies each corrective measure that will be undertaken to prevent reoccurrence of the reported incident.
- B) An ambulance service may request an extension to the ninety (90) calendar day report deadline in Section 9.1.3.A if more time is required to complete the quality assurance process. The Department may grant extensions not to exceed a total of ninety (90) calendar days.
- C) The Department may request further supplemental information concerning any mandatory reporting incident if it determines such information is necessary.

Section 10 – Data Collection and Reporting Requirements

- 10.1 All licensed ambulance services shall maintain records that include required data and information on patient care for each response that resulted in patient contact.
 - 10.1.1 To assure continuity of patient care, an ambulance service that transports a patient to a facility shall:
 - A) Provide the patient care data to the Department within forty-eight (48) hours from the time the unit went back in service as set forth in 6 CCR 1015-3, Chapter Three, thereby ensuring that a draft or completed patient care report is timely accessible by the receiving facility; and
 - B) For facilities that cannot otherwise access the patient care report, develop, maintain, and follow a policy and procedure to ensure the availability of the patient care report within forty-eight (48) hours from when the ambulance went back in service.
- 10.2 All licensed ambulance services shall provide the Department with:
 - 10.2.1 All patient care data and information required pursuant to the Rules Pertaining to Emergency Medical Services Data and Information Collection and Record Keeping at 6 CCR 1015-3, Chapter Three;
 - 10.2.2 An organizational profile pursuant to the Rules Pertaining to Emergency Medical Services Data and Information Collection and Record Keeping at 6 CCR 1015-3, Chapter Three; and

10.2.3 Any additional data and information as specified by the Department.

- 10.3 All licensed ambulance services must ensure accurate and complete patient care data are submitted to the Department in the form and manner as specified by the Department. If the Department determines errors exist in the submitted data, it may require the licensed ambulance service to correct and resubmit the data. The Department may consider the licensed ambulance service to be out of compliance with this rule if it does not provide the corrected data within the timeframe specified by the Department.

Section 11 – Medical Oversight and Quality Assurance Programs

- 11.1 Each licensed ambulance service shall have a minimum of one (1) medical director who:
- 11.1.1 Is a physician;
 - 11.1.2 Is currently licensed in Colorado in good standing;
 - 11.1.3 Implements and oversees a quality assurance program for the ambulance service; and
 - 11.1.4 Meets all requirements set forth in 6 CCR 1015-3, Chapter Two.
- 11.2 The ambulance service shall ensure that its medical director complies with all duties and responsibilities set forth in 6 CCR 1015-3, Chapter Two.
- 11.3 An ambulance service and the service's medical director shall comply with the requirements for a quality assurance program in accordance with the Rules Pertaining to EMS Practice and Medical Director Oversight at 6 CCR 1015-3, Chapter Two.
- 11.3.1 In addition, licensed ambulance services that implement a quality management program under medical direction pursuant to Sections 25-3.5-903 & 904, C.R.S., may claim the confidentiality, immunity, and privilege protections that are conferred by statute. see Section 25-3.5-904 C.R.S.
- 11.4 The Department may request a copy of the ambulance service's or medical director's quality assurance program, which may be marked as proprietary pursuant to Section 3.5.3.B.3.

Section 12 – Minimum Staffing Requirements, Patient Safety, and Safety and Staffing of Crew Members

- 12.1 Minimum Staffing Requirements
- 12.1.1 A licensed ambulance service shall comply with the following minimum ambulance staffing requirements:
 - A) The person responsible for providing direct emergency medical care and treatment to patients transported in an ambulance shall hold a current and valid certification or license as an EMS provider as defined in the Rules Pertaining to EMS Education, Certification or Licensure, and EMR Registration at 6 CCR 1015-3, Chapter One, or have a valid EMS Compact privilege to practice as an EMS provider in Colorado.
 - B) Each patient transport by a licensed ground ambulance service shall be staffed by a minimum of one (1) emergency medical services (EMS) provider who is licensed or certified in Colorado, or who has a valid EMS Compact privilege to

practice as an EMS provider in Colorado, to provide direct patient care, plus a vehicle operator.

- 1) Pursuant to Section 25-3.5-301(3), C.R.S., an exception to the requirements set forth in Section 12.1.1.B exists solely under the unusual conditions when only a vehicle operator is present to transport the patient. Under these limited circumstances, other individuals who are not licensed or certified as an EMS provider may accompany the patient during transport.
- C) Emergency medical services providers shall operate only within their scopes of practice and pursuant to medical protocols, including an EMS provider acting in accordance with a scope of practice waiver granted pursuant to 6 CCR 1015-3, Chapter Two.
- D) The vehicle operator shall hold a current and valid driver's license and meet all criteria required by Section 14.4.3.D of these rules.
 - 1) The sole exception to Section 12.1.1.D is in the case of an emergency in an ambulance service area where no person possessing these qualifications is present or available to respond to a call for the emergency transportation of patients by ambulance. Under these circumstances, any person may operate the ambulance to transport any sick, injured, or otherwise incapacitated or helpless person in order to stabilize the medical condition of the person pending the availability of medical care. See Section 25-3.5-202, C.R.S.

12.2 Patient Safety and Safety and Staffing of Crew Members

- 12.2.1 Each ambulance service shall establish and implement a policy that sets forth the service's staffing pattern and addresses considerations such as patient safety and safety and staffing of crew members, including but not limited to:
 - A) Fatigue of staff members, including education and training to mitigate fatigue and risks; and
 - B) Staffing patterns that support the services that the ambulance service provides.

Section 13 – Minimum Equipment Requirements

13.1 For purposes of this Section 13, every ambulance service shall have:

- 13.1.1 Medical protocols that have been approved by the service medical director;
- 13.1.2 Policies that clearly document equipment requirements for each permitted ambulance per medical protocol, including the minimum equipment requirements as set forth in these rules; and
- 13.1.3 Sufficient medical equipment and supplies as provided in these rules to provide care consistent with the ambulance service's medical protocols and appropriate patient care standards for the ages and sizes of the population served.

13.2 Minimum Equipment for Ambulances

- 13.2.1 A licensed ambulance service shall require each of its permitted ambulances to have appropriate means of assessing patients pursuant to the ambulance service's medical protocols, including, but not limited to:
- A) Pediatric length, age, or weight-based system for determining drug dosage calculations and sizing equipment.
- 13.2.2 A licensed ambulance service shall require each of its permitted ambulances to have appropriate means of treating patients pursuant to the ambulance service's medical protocols which include, but are not limited to, the following:
- A) Ventilation and airway equipment;
 - B) Splinting or other appropriate devices for treating orthopedic and spinal injuries;
 - C) Dressings and other appropriate materials to address bleeding and burns;
 - D) Obstetrical supplies for field deliveries;
 - E) Pharmacological agents;
 - F) Hemorrhage control equipment, including a commercially manufactured hemorrhage control tourniquet; and
 - G) Means of defibrillation capable of delivering electrical countershock.
- 13.2.3 A licensed ambulance service shall require each of its permitted ambulances to have appropriate equipment to support ground ambulance operations, pursuant to the ambulance service's medical protocols and policies, which includes, but is not limited to, the following:-
- A) Communications equipment:
 - 1) On or before July 1, 2026, two (2) different forms of communications equipment on each permitted ambulance, to include:
 - a) Two-way voice radio communications with PSAP (Public Safety Answering Points) in good working order that will enable clear voice communications between ambulance personnel and the:
 - i) Ambulance service's dispatch;
 - ii) Medical control facility or the medical control physician;
 - iii) Receiving facilities; and
 - iv) Mutual aid agencies; and
 - b) A redundant form of communications equipment, which may include wireless telephones;
 - B) Infection control equipment and supplies; and

- C) Mechanisms to secure equipment stored in the ambulance's patient compartment.

13.2.4 A licensed ambulance service shall require each of its permitted ambulances to have, at minimum, vehicle safety equipment pertinent to:

- A) Traffic safety devices, including but not limited to vests and warning triangles;
- B) Daytime and nighttime operations, including but not limited to an operating flashlight and incident and scene lighting;
- C) All weather conditions, to include items such as tire chains; and
- D) Fire hazard abatement, to include, at minimum, fire extinguishers.

13.2.5 A licensed ambulance service shall require each of its permitted ambulances to carry at minimum:

- A) Appropriately-sized personal protective equipment (PPE) for all on-duty personnel, conforming to national standards such as the Centers for Disease Control and Prevention (CDC) or the Occupational Safety and Health Administration (OSHA); and
- B) Sharps containers and receptacles for the appropriate disposal and storage of medical waste and biohazards.

13.2.6 A licensed ambulance service shall require, at minimum, that each of its permitted ambulances be equipped with the following personal restraint equipment:

- A) A child protective restraint system that accommodates a weight range between five (5) and ninety-nine (99) pounds; and
- B) Appropriate protective restraints for patients, crew, accompanying family members, and other vehicle occupants.

13.3 Minimum Equipment for Ambulances for Advanced Life Support (ALS) or Critical Care Services

13.3.1 In addition to all equipment required in Section 13.2, a licensed ambulance service that provides advanced life support or critical care services shall ensure that every permitted ambulance that operates as such is also equipped with the following minimum medical and operational equipment:

- A) Means of assessing and treating the patient pursuant to the ambulance service's medical protocols including, but not limited to, the following:
 - 1) End-tidal CO₂ monitor or detection device;
 - 2) Portable, battery-operated cardiac monitor-defibrillator;
 - 3) Advanced airway equipment;
 - 4) Fluid maintenance solutions per medical protocol;
 - 5) Medication administration equipment per medical protocol; and

- 6) For permitted ambulances providing critical care services, appropriate equipment to provide such services, subject to medical protocol.

13.4 Minimum Equipment for Ambulances Providing Specialized Services

13.4.1 Ambulance services may choose to provide specialized services such as stroke care, bariatric care, and pediatric care in addition to 911 response and interfacility transport services.

- A) For all permitted ambulances that provide specialized services, a licensed ambulance service shall ensure that every such ambulance is equipped with:
 - 1) The minimum medical and operational equipment required in Section 13.2 or 13.3, depending upon the level of service (BLS or ALS) the ambulance service provides; and
 - 2) The equipment necessary to perform the specific specialized services per medical protocol, as determined by the ambulance service medical director.
- B) These minimum equipment rules apply to all ambulances that provide specialized services, whether they furnish specialized services only or in addition to 911 response and/or interfacility transport services.

Section 14 – Administrative and Operational Standards for Governance, Patient Records and Record Retention, Personnel, and Policies and Procedures

14.1 Administrative and Operating Standards – Licensees shall maintain administrative policies, procedures and/or operating standards necessary to comply with these rules and in accordance with organizational governance requirements.

14.2 This Section 14 shall be effective on July 1, 2026.

14.3 Ambulance services shall ensure patients the following rights at a minimum:

14.3.1 The right of the patient and their property to be treated, to the extent possible, in a respectful manner that recognizes a person's dignity, cultural values, and religious beliefs, and provides for personal privacy during the course of treatment;

14.3.2 The right of the patient to be free from discrimination in the provision of services;

14.3.3 The right of the patient to be free from neglect; financial exploitation; and verbal, physical, and psychological abuse;

14.3.4 The right of the patient to participate in decisions involving patient care, to the extent possible;

14.3.5 The right of the patient to have personally identifying health information protected from unnecessary disclosure;

14.3.6 The right of the patient or the patient's legal representative to file a complaint with the ambulance service and/or Department concerning services or care that is or is not furnished, without fear of discrimination or retaliation by the ambulance service owner,

administrator, EMS providers, or any service staff; and the right to receive notification from the ambulance service and/or Department of the resolution of the complaint.

- 14.3.7 The right of the patient or the patient's legal representative to obtain medical record information.
- 14.3.8 The right to receive treatment according to a known, valid medical or behavioral health advance directive, including the right to receive treatment as directed by a legally authorized person pursuant to Colorado Revised Statutes.
- 14.3.9 The right to receive medical assessment and care delivered by the ambulance service's EMS providers pursuant to their appropriate scopes of practice and in accordance with the needs of the patient, to the extent possible.

14.4 Personnel

14.4.1 General Personnel Standards - At a minimum, each ambulance service shall operate with qualified personnel, including an administrator, a medical director, and EMS providers.

14.4.2 Beginning July 1, 2026, the ambulance service shall:

- A) Conduct a licensure/certification check on every prospective employee, contractor, or volunteer who is a licensed or certified EMS provider in Colorado and who will be providing patient care. At a minimum, the ambulance service must review the Department's "OATH-public lookup" or successor database before employment to establish that the provider's license or certification has not been suspended or revoked and has not expired;
- B) Conduct a licensure/certification check on every prospective employee, contractor, or volunteer who is an EMS provider and who will be providing patient care with a valid privilege to practice in Colorado pursuant to the EMS Compact. At a minimum, the ambulance service must review the EMS Compact database before employment to establish that the provider's privilege to practice has not been suspended or revoked and has not expired;
- C) After conducting the initial licensure/certification check on EMS providers, an ambulance service must, at a minimum, review the Department's "OATH-public lookup" or successor database, or the EMS Compact for out-of-state licensed providers, on an annual basis thereafter to establish that every EMS provider who is employed by, contracts with, or volunteers for the ambulance service maintains a license or certification or has a valid privilege to practice that has not been suspended or revoked, or that has not expired.

14.4.3 Role-Specific Personnel Standards

- A) Each ambulance service shall have an administrator who is responsible for the service's day-to-day business operations.
 - 1) Administrator Qualifications. Administrators hired after July 1, 2026, shall:
 - a) Possess a high school diploma or equivalent; and

- b) Have at least six (6) months of health care, emergency medical service, ambulance service, health service administration, or general business experience; and
 - c) Have not been excluded from participation in Medicare, Medicaid, or state health care programs.
- 2) The administrator of an ambulance service shall assume daily oversight of the service including, but not limited to, serving as the ambulance service contact person with the Department and maintaining ongoing communications with the Department.
- B) Each ambulance service shall have a medical director who is responsible for medical oversight of the service and its EMS providers as provided in Section 11 of this Chapter Four and 6 CCR 1015-3, Chapter Two.
- C) All EMS providers hired by, contracted with, or volunteering for the service to provide patient care shall:
 - 1) Have a current license or certification from the state of Colorado pursuant to 6 CCR 1015-3, Chapter One, or have a valid equivalent privilege to practice as an EMS provider under the EMS Compact;
 - 2) Operate only within the scope of practice as outlined in 6 CCR 1015-3, Chapter Two - Rules Pertaining to EMS Practice and Medical Director Oversight, or under scope of practice waivers granted by the Department to the medical director; and
 - 3) Be credentialed to practice by the ambulance service's medical director.
- D) All vehicle operators hired by, contracted with, or volunteering for the service after July 1, 2026, shall:
 - 1) Be at least eighteen (18) years of age;
 - 2) Have a currently valid drivers' license as set forth in Sections 42-2-101 *et seq.*, C.R.S., with appropriate endorsements for the vehicle class; and
 - 3) Have documentation of successful completion of an agency approved emergency vehicle operation program.

14.4.4 Training and Orientation

- A) Beginning July 1, 2026, no employee, contractor, or volunteer shall provide patient care prior to receiving orientation that specifically addresses the following:
 - 1) Matters of confidentiality, safety, and appropriate behavior;
 - 2) The individual's specific duties and responsibilities prior to assuming the role;-
 - 3) The service's policies, procedures, and applicable state and federal laws;

- 4) An overview of state regulatory oversight and, if applicable, local requirements that apply to the ambulance service and EMS provider;
- 5) Reporting requirements, including mandatory incident reporting as set forth in Section 9 of this Chapter Four; and
- 6) Patient rights as found in Section 14.3.

14.4.5 Personnel Records

- A) Ambulance services shall maintain appropriate and current personnel files for each employee, contractor, and volunteer and shall retain those files for a minimum of three (3) years, or longer if otherwise required, following an employee's, contractor's, or volunteer's separation from service.

14.5 Patient Records and Records Retention

14.5.1 Patient Records - The ambulance service shall implement procedures that establish patient records retention requirements in accordance with state and federal requirements, and at minimum, the following:

- A) For purposes of these rules, the ambulance service shall maintain its patient care reports for no less than seven (7) years.
- B) If any changes/corrections, deletions, or other modifications are made to any portion of a patient care report:
 - 1) They must be distinctly identified, and
 - 2) The ambulance service must provide a reliable means to clearly identify the original content, the modified content, and the time, date, and authorship of each modification of the record.

14.5.2 Facility Access to Records

- A) To facilitate the continuum of care, an ambulance service shall ensure that ambulance service employees, contractors, or volunteers provide receiving facility medical staff, at minimum, with a verbal patient report containing the details of the assessment and care provided to the patient.
- B) A verbal patient report shall be followed by submission of patient care data as set forth in Section 10.2.1.

14.5.3 Patient Access to Records - The ambulance service shall implement procedures to allow patient access to the patient's medical records. The policies must include and identify, at a minimum, the method by which the patient or their legal representative may access the patient's medical records upon request.

14.5.4 Equipment and Vehicle Records

- A) The ambulance service shall:

- 1) Require its employees, contractors, or volunteers to conduct and record routine medical equipment and medications checks, the records of which must be maintained for a period of two (2) years;
 - 2) Maintain all vehicle maintenance records associated with each permitted ambulance for the life of the vehicle; and
 - 3) Develop and implement a policy no later than July 1, 2026, regarding routine and scheduled maintenance for each piece of durable medical equipment that is used in each permitted ambulance. The scheduled maintenance must conform to manufacturers' recommendations, and all equipment maintenance records shall be maintained for the life of the equipment.
- B) The ambulance service shall make available to the Department for inspection all records required by Section 14.5.4(A) of this Chapter Four upon the Department's request.

14.5.5 Permanent Closures - With regard to any individual patient records that the ambulance service is legally obligated to maintain, each licensee that surrenders its license shall:

- A) Inform the Department in writing of the specific plan providing for the storage of and patient access to individual patient records within ten (10) calendar days prior to closure; and
- B) Ensure that the disposition of all patient records is in accordance with applicable state and federal law.

14.6 Policies and Procedures – for the convenience of licensees, this section contains 1) a compilation of policies required by these rules that are not set forth in other parts of this rule, and 2) a compilation of policies required by these rules that are set forth in other parts of this rule.

14.6.1 Each ambulance service shall develop in writing and implement policies and procedures for the following matters that are not elsewhere described in these rules:

- A) Designating, in policy, the position title or organizational role that will serve as a backup administrator to act in the administrator's absence and who will, at minimum, maintain on-call availability at all hours employees are providing services. The administrator retains accountability for the operations of the ambulance service during the backup administrator's day-to-day supervision and control of the ambulance service.
- B) The ambulance service's manner of responding to, investigating, and resolving complaints received to address, at minimum, the procedures by and timeframes in which the ambulance service shall process:
 - 1) Complaint intake;
 - 2) Complaint investigation;
 - 3) Fact-finding and decision-making;
 - 4) Referral of complaints regarding medical care to the QA program;

- 5) Notification of the complaint resolution with the complainant and the subject of complaint, as applicable;
 - 6) Notification to other entities, if applicable; and
 - 7) Retention of complaint files for at least four (4) years following resolution of the complaint.
- C) No later than July 1, 2026, the ambulance service's policy for decommissioning of ambulances to protect the integrity of the EMS system. The policy shall require that when the ambulance service sells, gifts, decommissions, or transfers ownership of an ambulance to an entity other than an ambulance service licensed in Colorado or an equivalent entity in another state or country, or to an EMS educational program for teaching purposes, it shall remove or permanently deface:
- 1) Characteristics of the vehicle that identify it as an ambulance, including, but not limited to, all instances of the word "ambulance" (including reverse print), medic, paramedic, emergency, star of life emblem, and reflective striping;
 - 2) Emergency lighting that is red or blue in color;
 - 3) Sirens and public address systems; and
 - 4) Other characteristics unique to the ambulance service.

14.6.2 Each ambulance service shall develop in writing and implement these policies and procedures that are referenced elsewhere in this rule, and shall make them available for Department inspection. At a minimum, the policies and procedures shall address:

- A) No later than July 1, 2026, the preventative maintenance policy for vehicles and durable medical equipment, and mechanical safety inspection requirements, as set forth in Sections 3.5.2.D, 3.7.2.D, 3.11.1.B, and 14.5.4.A;
- B) The minimum equipment requirements for each permitted ambulance as required by Section 13, Sections 3.5.2.D and 3.7.2.F, medical protocols, current emergency medical care standards, and any applicable scope of practice waivers;
- C) No later than July 1, 2026, staff training regarding mandatory incident reporting and obligation to report to the ambulance service administrator as set forth in Section 9;
- D) The manner in which the ambulance service will ensure the availability of patient care reports to all facilities that cannot otherwise access these reports, as set forth in Section 10.1.1.B;
- E) The requirements of the ambulance service's quality assurance program (QA), as set forth in Section 11.3;
- F) The ambulance service's staffing pattern and safety considerations as set forth in Section 12.2.1;

- G) Communications equipment that meets the minimum standards set forth in Section 13.2.3(A) and (B);
- H) Patient rights as set forth in Section 14.3;
- I) The ambulance service's patient record retention requirements in accordance with state and federal requirements and Section 14.5;
- J) Transfer of care of a patient as set forth in Section 14.5.2; and
- K) Access to patient records as set forth in Section 14.5.3.

Section 15 – Criteria for Administrative Waivers to Rules

- 15.1 Any ambulance service may apply to the Department for an administrative waiver to these rules based on established need. Waivers to EMS provider scope of practice are governed by 6 CCR 1015-3, Chapter Two.
 - 15.1.1 The Department may grant an administrative waiver of a rule if the applicant satisfactorily demonstrates:
 - A) The proposed administrative waiver does not adversely affect the health and safety of a patient; and
 - B) In the particular situation, the requirement serves no beneficial purpose; or
 - C) Circumstances indicate that the public benefit of waiving the requirement outweighs the public benefit to be gained by strict adherence to the requirement.
 - 15.1.2 Administrative waivers cannot be granted for any statutory requirement under state or federal law, or for requirements under local codes or ordinances.
 - 15.1.3 Administrative waivers are generally granted for a limited term and shall be granted for a period no longer than the current license and/or permit term.
- 15.2 A licensed ambulance service must fully comply with all rules unless it has received official written authorization from the Department granting an administrative waiver for a specific rule.
- 15.3 Licensed ambulance services that seek an administrative waiver shall submit a completed application to the Department in a form and manner determined by the Department.
 - 15.3.1 The request for an administrative waiver shall include, but not be limited to, the text of or a description of the rule to be waived, and the justification for the waiver.
 - 15.3.2 The Department may:
 - A) Require the applicant to provide additional information if the initial waiver request is determined to be insufficient; and
 - B) Consider any other information it deems relevant, including but not limited to complaint investigation reports and compliance history.
 - 15.3.3 A waiver request shall not be considered complete until all of the information required by the Department is submitted.

- 15.3.4 The completed waiver request shall be submitted to the Department in a timely fashion so as to ensure compliance with these rules.
- A) Waiver requests may be submitted by ambulance service staff but shall include specific authorization by the ambulance service's administrator.
- 15.3.5 The waiver request shall be a matter of public record and is subject to disclosure requirements under the Colorado Open Records Act (Section 24-72-200.1 *et seq.*, C.R.S.).
- 15.4 After reviewing the initial waiver request, the Department shall make a decision on the request and send notice of that decision to the licensed ambulance service.
- 15.4.1 If the administrative waiver is granted, the Department will specify:
- A) The effective date and expiration date of the administrative waiver; and
- B) Terms and conditions of the administrative waiver.
- 15.4.2 The Department may deny, revoke, or suspend an administrative waiver if it determines that:
- A) Its approval or continuation jeopardizes the health, safety, and/or welfare of patients;
- B) The ambulance service has provided false or misleading information in the waiver request;
- C) The ambulance service has failed to comply with conditions of an approved waiver; or
- D) A change in federal or state law prohibits continuation of the waiver.
- 15.5 If the Department denies an administrative waiver request or revokes or suspends an administrative waiver, it shall provide the ambulance service with a notice explaining the basis for the action. The notice shall also inform the ambulance service of its right to appeal and the procedure for appealing the action.
- 15.6 Appeals of Departmental actions shall be conducted in accordance with the State Administrative Procedure Act, Section 24-4-101, *et seq.*, C.R.S.
- 15.7 If a rule pertaining to an existing administrative waiver is amended or repealed obviating the need for the waiver, the administrative waiver shall expire on the effective date of the rule change.
- 15.8 If an ambulance service has made a timely and sufficient request to extend an existing administrative waiver and the Department fails to take action prior to the waiver's expiration date, the existing administrative waiver shall not expire until the Department acts upon the request. The Department, in its sole discretion, shall determine whether the request was timely and sufficient.

Section 16 – County and City-and-County Authorization to Operate

- 16.1 Local Authorization to Operate

16.1.1 On and after July 1, 2024, a licensed ambulance service shall not operate on a regular basis without a local authorization to operate from the governing body of a city-and-county or the board of county commissioners for the county or city-and-county ("local authorizing authority") in which the ambulance service operates or seeks to operate, except as provided below:

- A) Licensed ambulance services that do not operate on a regular basis as defined in Section 16.2.2 do not have to obtain an authorization to operate.
- B) Licensed ambulance services do not have to obtain local authorization to operate on a regular basis in counties or city-and-counties that have opted out of issuing authorizations to operate in accordance with Section 16.7 of this Chapter Four.
- C) Local authorization to operate is not required for any of the exemptions set forth in Section 3.3 of this Chapter Four.

16.2 Operate on a Regular Basis

16.2.1 A licensed ambulance service that initiates a patient transport from points originating in a county or city-and-county is deemed to operate on a regular basis within that jurisdiction if any of the following conditions are satisfied:

- A) The ambulance service establishes a fixed operational base in the jurisdiction governed by the local authorizing authority and provides, within that jurisdiction, patient transport in a prehospital setting;
- B) The ambulance service initiates or is expected to initiate patient transport in the jurisdiction governed by the local authorizing authority twelve (12) or more times in any calendar year; or
- C) The ambulance service enters into any contractual agreement, memorandum of understanding, or other legal instrument for the provision of ambulance services:
 - 1) With the local authorizing authority;
 - 2) With an entity that has entered into any contractual agreement, memorandum of understanding, or other legal instrument with the local authorizing authority; or
 - 3) Within the jurisdiction of the local authorizing authority.

16.2.2 An ambulance service is not considered to be operating on a regular basis and is not required to obtain an authorization to operate in any of the following instances:

- A) Ambulance services that initiate, or are expected to initiate, a patient transport in the jurisdiction governed by the local authorizing authority eleven (11) or fewer times in any calendar year;
- B) Transports that are initiated under circumstances in which locally-authorized ground ambulance services are unavailable;

- C) Transports by an emergency responder, as defined in Section 24-33.5-1235(2)(d)(I), C.R.S., that provides ambulance services as part of/in conjunction with the Colorado coordinated regional mutual aid system or the regional and statewide mutual aid system, pursuant to Section 24-33.5-1235(4)(f), C.R.S.; or
- D) Transports conducted pursuant to mutual aid agreements.

16.3 Issuance of Local Authorization to Operate

16.3.1 If, on or before August 1, 2024, a county or city-and-county has not implemented the issuance of authorization to operate and has not opted out of issuing authorization to operate, licensed ambulance services operating on a regular basis in those jurisdictions shall be considered to have obtained authorization to operate from those jurisdictions until:

- A) The county or city-and-county implements an authorization to operate process; or
- B) The county or city-and-county opts out of issuing authorization to operate in accordance with Section 16.7 below.

16.3.2 Any county or city-and-county that requires ambulance services to receive local authorization to operate in its jurisdiction shall:

- A) Require every applicant to submit an application, in a form and manner as determined by the Department, to the county or city-and-county; and
- B) Notify the Department at least on an annual basis, or within thirty (30) days of when the county or city-and-county either issues or terminates an ambulance service's local authorization.

16.4 If a county or city-and-county enacts an ordinance or resolution governing the local authorization to operate, the ordinance or resolution may:

16.4.1 Limit the number of ambulance services that will be authorized to operate within the county's or city-and-county's jurisdiction;

16.4.2 Determine and prescribe ambulance service areas within the county's or city-and-county's jurisdiction;

16.4.3 Authorize the local authority to contract with ambulance services; and

16.4.4 Establish other necessary requirements that are consistent with statute and these rules.

16.5 A county or city-and-county shall not impose standards that are less stringent than the minimum standards set forth in these rules.

16.5.1 However, a county or city-and-county may impose obligations that exceed the minimum standards set forth in these rules through the use of memoranda of understanding, contracts, or other such agreements.

16.6 Pursuant to Section 25-3.5-314(5)(e), C.R.S., a local authority that suspends or revokes an ambulance service's local authorization to operate in its jurisdiction shall, within thirty (30) days of issuing the suspension or revocation:

- 16.6.1 Notify the Department of the suspension or revocation; and
- 16.6.2 Provide supporting documentation for the Department's review of the possible effect that the suspension or revocation has on the ambulance service's state license.
- 16.7 Opting Out of Local Authorization to Operate
 - 16.7.1 A county or city-and-county is required either to issue local authorization to operate or opt-out of issuing local authorization to operate.
 - A) After July 1, 2024, and before July 1 of any year thereafter, any county or city-and-county that opts out of issuing local authorization to operate within its jurisdiction to ambulance services shall notify the Department within thirty (30) days of its decision to opt out in a form and manner as determined by the Department.
 - B) However, a county or city-and-county that has opted out of issuing local authorization to operate is not prohibited from determining at a later date to reverse its decision and to require licensed ground ambulance services that operate on a regular basis in its jurisdiction to obtain local authorization to operate. Under these circumstances, the county or city-and-county shall notify the Department of its decision within thirty (30) days.

Section 17 - Incorporation by Reference

- 17.1 Published Material Incorporated by Reference.
 - 17.1.1 Throughout this Chapter Four – Rules Pertaining to Licensure of Ground Ambulance Services (“state ground ambulance rules”), federal regulations, state regulations, and standards or guidelines of outside organizations have been adopted and incorporated by reference. Unless a prior version of the incorporated material is otherwise specifically indicated, the materials incorporated by reference herein include only those versions that were in effect as of December 20, 2023, and such incorporation does not include later amendments to or editions of the referenced material.
 - 17.1.2 Materials incorporated by reference are available for public inspection, and copies (including certified copies) can be obtained at reasonable cost, during normal business hours from the Colorado Department of Public Health and Environment, Health Facilities and Emergency Medical Services Division, 4300 Cherry Creek Drive South, Denver, Colorado 80246.
 - 17.1.3 A copy of the materials incorporated in these state ground ambulance rules is available for public inspection at the State Publications Depository and Distribution Center of the Colorado State Library.
- 17.2 Availability from Source Agencies or Organizations
 - 17.2.1 All federal agency regulations incorporated by reference in these rules are available at no cost in the online edition of the Code of Federal Regulations (CFR) hosted by the U.S. Government Printing Office, online at www.govinfo.gov.
 - A) 49 C.F.R Part 566,

B) 49 C.F.R. Part 567, and

C) 49 C.F.R. Part 568

17.2.2 All state regulations incorporated by reference herein are available at no cost in the online edition of the Code of Colorado Regulations (CCR) hosted by the Colorado Secretary of State's Office, online at Health Facilities and Emergency Medical Services Division.

17.3 Interested persons may obtain certified copies of any non-copyrighted material from the Department at cost upon request. Information regarding how the incorporated materials may be obtained or examined is available from the division by contacting:

EMTS Branch Chief

Health Facilities and EMS Division

Colorado Department of Public Health and Environment

4300 Cherry Creek Drive South

Denver, Colorado 80246-1530



COLORADO

Board of Health

Department of Public Health & Environment

Errata Sheet Regarding 6CCR 1015-3, Chapter Four - Rules Pertaining to Licensure of Ground Ambulance Services

Proposed by the State Emergency Medical and Trauma Services Advisory Council - Sheet #1

1. After Line #283 Insert **"A) Section 14 of these rules will not go into effect until July 1, 2026"**
2. Line #821 and 822 Strike **D), "Patient suicide or attempted suicide that occurs during the provision of patient care."** and renumber.
3. Line #840 Strike "or"
4. Line #841 Strike "." Insert **"; or"** at the end of the line
5. After line #841 Insert **"5) Patient suicide or attempted suicide that occurs during the provision of patient care."**
6. Line #s 1190 and 1191 Strike **"Unless otherwise stated herein, all of Section 14 shall be effective on July 1, 2024."** and Insert **"This Section 14 shall be effective on July 1, 2026."**
7. Line #1226 Strike **"Beginning July 1, 2024"**
8. Line #1253 Strike **"2024"** and Insert **"2026"**
9. Line #1279 Strike **"2024"** and Insert **"2026"**
10. Lines #1284 and 1285, strike **"Have documentation of successful completion of an Emergency Vehicle Operations Course (EVOC) or equivalent course"** and insert **"Have documentation of successful completion of an agency approved emergency vehicle operation program."**
11. Line #1287 Strike **"Beginning July 1, 2025"**
12. Line #1337 Strike **"no later than July 1, 2025"**
13. Line #1379 Strike **"No later than July 1, 2025"**
14. Line #1397 Strike **"No later than July 1, 2025"**
15. Line #1405 Strike **"No later than July 1, 2025"**

PHIL WEISER
Attorney General

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Office of the Attorney General

Tracking number: 2023-00715

Opinion of the Attorney General rendered in connection with the rules adopted by the
Health Facilities and Emergency Medical Services Division (1011, 1015 Series)

on 12/20/2023

6 CCR 1015-3

EMERGENCY MEDICAL SERVICES

The above-referenced rules were submitted to this office on 12/26/2023 as required by section 24-4-103, C.R.S. This office has reviewed them and finds no apparent constitutional or legal deficiency in their form or substance.

January 04, 2024 10:05:45

Philip J. Weiser
Attorney General
by Kurtis Morrison
Deputy Attorney General

Permanent Rules Adopted

Department

Department of Early Childhood

Agency

General Early Childhood Administration and Programs

CCR number

8 CCR 1401-1

Rule title

8 CCR 1401-1 GENERAL EARLY CHILDHOOD RULES AND REGULATIONS 1 - eff
02/14/2024

Effective date

02/14/2024

COLORADO DEPARTMENT OF EARLY CHILDHOOD

General Early Childhood Administration and Programs

GENERAL EARLY CHILDHOOD RULES AND REGULATIONS

8 CCR 1401-1

[Editor's Notes follow the text of the rules at the end of this CCR Document.]

1.100 AUTHORITY

These rules and regulations are adopted pursuant to the rulemaking authority provided in section 26.5-1-105(1)(a), C.R.S., and are intended to be consistent with the requirements of the State Administrative Procedures Act, section 24-4-101 through 24-4-204, (the "APA"), C.R.S.; the Anna Jo Garcia Haynes Early Childhood Act, Title 26.5 of the C.R.S. (the "Early Childhood Act"), C.R.S.; Colorado Nurse Home Visitor Program Act in sections 26.5-3-501 through 26.5-3-508, C.R.S.; and the Child Protection Act of 1987, in sections 19-3-301 through 19-3-317, C.R.S.

1.101 SCOPE AND PURPOSE

These rules and regulations shall govern the processes, procedures, and participation in the general administration of early childhood programs and services that are applicable across divisions within the Department; School Readiness Quality Improvement Program; Early Childhood Councils; and Nurse Home Visitor Programs in Colorado.

1.102 APPLICABILITY

The provisions of these rules and regulations shall be applicable to all services administered by the Department within the scope of its authority as granted in section 19-1-307(2)(i), (k)-(o), (t), and (y), C.R.S., Early Childhood Councils, and Nurse Home Visitor Program providers regulated by the Department.

1.103 ABUSE AND NEGLECT BACKGROUND CHECK FEES

- A. The Department shall assess a uniform fee for the purpose of conducting employment, volunteer, and substitute placement background screenings to determine if an individual has been confirmed in the state-wide information system, Colorado TRAILS system, as the person responsible in an incident of child abuse and/or neglect. The fee shall be established by the Department, and reviewed annually compliant with section 19-1-307(2.5), C.R.S., to ensure the fee does not exceed the direct and indirect costs of administering the services defined in sections 19-1-307(2)(i), (k)-(o), (t), and (y), C.R.S.
- B. The fee established by the Department to conduct employment, volunteer, and substitute placement background screenings must be consistent with the annual appropriation level set by the General Assembly, and all fees collected will be paid into the Records and Reports Fund. The Department shall publicly post the amount of the abuse and neglect background check fee on its website and provide reasonable notice on the website prior to the fee changing.
- C. The Department shall not set the fee above thirty dollars (\$30), unless specifically approved by the Executive Director of the Department to fund an increase in the direct and indirect costs of administering the services defined in sections 19-1-307(2)(i), (k)-(o), (t), and (y), C.R.S. If an increase in the fee amount is approved by the Executive Director of the Department, the

Department will notify interested persons at least thirty (30) calendar days in advance on the Department's Public Notice Information webpage at: <https://cdec.colorado.gov/public-notice-information>, and the increase will be communicated by the Department.

- D. If the Department anticipates a reduction in the fee amount in compliance with section 19-1-307(2.5), C.R.S., the Department shall provide notice on the Department's Public Notice Information webpage at: <https://cdec.colorado.gov/public-notice-information>, and the decrease will be communicated by the Department.

...

1.300 EARLY CHILDHOOD COUNCILS

...

1.306 STATE DEPARTMENT FUNDING REQUIREMENTS

This rule is promulgated pursuant to sections 26.5-2-204(5) and 26.5-2-207(2)(a), C.R.S.

- A. To be eligible to receive infrastructure, quality improvement, technical assistance, and evaluation funding from the state department, an Early Childhood Council must:

...

2. Submit a strategic plan for compliance review in accordance with rule section 1.305(C) and (D).

- B. Each Early Childhood Council seeking infrastructure, quality improvement, technical assistance, and evaluation funding shall submit an application to the state department that includes or describes:

...

7. The Council's strategic plan, in compliance with rule section 1.305(C) and (D).

...

1.400 NURSE HOME VISITOR PROGRAM

1.401 DEFINITIONS

- A. "Alternative Nurse Home Visitation Program" means a program that provides home visits by nurses but is not the program described in section 26.5-3-504(1), C.R.S., but does qualify for funding from the Nurse Home Visitor Program Fund because it meets the requirements of section 26.5-3-506, C.R.S., and rule section 1.410 of these rules.
- B. "Conflict of interest" means a personal or financial interest that could reasonably be perceived as an interest that may influence an individual in their official duties.
- C. "Entity" means any nonprofit, not-for-profit, or for-profit corporation; religious or charitable organization; institution of higher education; visiting nurse association; existing visiting nurse program; county, district, or municipal public health agency; county department of human or social services; political subdivision of the state; or other governmental agency; or any combination thereof.

- D. "Expansion site" means a program that is already serving at least fifty (50) low-income, first-time mothers, through a grant received under these rules, in the previous fiscal year, and the implementing entity is applying for additional funding to enable it to serve additional low-income, first-time mothers.
- E. "Financial interest" means a substantial interest held by an individual which is an ownership or vested interest in an entity, or employment or a prospective employment for which negotiations have begun, or a directorship or officership in an entity.
- F. "Health sciences facility" means the Anschutz medical campus or a successor facility located at the university of Colorado health sciences center that is selected by the president of the university of Colorado pursuant to section 26.5-3-505, C.R.S., to assist the executive director in administering the program.
- G. "Low-income" means an annual income that does not exceed two hundred percent (200%) of the federal poverty line.
- H. "New entity" means any entity that has not previously received funding for the program pursuant to these rules.
- I. "Nurse" means a person licensed as a professional nurse pursuant to part 1 of article 255 of Title 12, , C.R.S., or accredited by another state or voluntary agency that the state board of nursing has identified by rule pursuant to section 12-255-107(1)(a), C.R.S., as one whose accreditation may be accepted in lieu of board approval.
- J. "Nurse Home Visitor Program" or "Program" means the nurse home visitor program established in part 5 of article 3 of Title 26.5, C.R.S.
- K. "Nurse Home Visitor Program Fund" means the fund described in section 26.5-3-507(2)(c), C.R.S.
- L. "Nurse supervisor" means a nurse with a Master's degree in nursing or public health, unless the implementing entity can demonstrate that such a person is either unavailable within the community or an appropriately qualified nurse without a Master's degree is available. M. "State Department" means the Colorado Department of Early Childhood.
- N. "Visit protocols" mean nurse home visit guidelines addressing, at a minimum, prenatal, infancy and toddler development. The visit protocols must cover topics such as positive birth outcomes, parental life course development and parenting skills.

1.402 PROCEDURES FOR GRANT APPLICATION

- A. Grant Application Contents
 - 1. All applications shall be submitted to the state department by entities as defined in rule section 1.401(D) in accordance with these rules and shall contain, at a minimum, the basic program elements specified in section 26.5-3-506(1), C.R.S., and the following information. A budget which includes each of the following:
 - a. Salaries and benefits for the staff required in rule section 1.407;
 - b. Costs of the training provided by the health sciences facility, and costs to cover any other training required by the health sciences facility. Allowable costs include, but are not limited to, travel costs and training materials;

- c. Costs to purchase and maintain the management information system and related technical assistance;
- d. Operating costs, including, but not limited to, office and program supplies, postage, telephones, computer(s) with internet access, liability insurance, medical supplies, mileage reimbursement and other staff development for the required staff;
- e. A description of how the applicant will fund any additional costs not funded by the grant;
- f. Any in-kind contributions the applicant or other stakeholders in the community may donate.

2. Applications for New Entities

In addition to the requirements of rule section 1.402(A)(1), applications for new entities shall contain, at a minimum, the following information:

- a. A description of the experience the applicant has working with the target population and existing home visitation programs;
- b. A description of the community support for the program and for the applicant as the lead organization in its implementation, including detailed information about the broad-based support for the program's implementation. Breadth of community support shall be judged by the diversity of those involved in supporting the program's implementation, and can be evidenced through letters of support and more formal referral relationships among various community organizations and the applicant;
- c. A description of the specific needs of the population to be served including, but not limited to, the socio-demographic and health characteristics that justify the need for the program and the number of first-time, low-income mothers eligible for the program;
- d. A description of the relationship of the applicant with the schools, prenatal clinics and other referral sources for the first-time, low-income mothers who will be served by the program, with specific information about the duration of these relationships;
- e. A description of the nature and duration of the referral linkages that exist between the applicant and other service providers throughout the community including, but not limited to, providers of social services, mental health services, workforce preparation services, job training services, legal services, health care services and child care services;
- f. Except as provided in rule section 1.409, a description of a plan for recruiting at least one hundred (100) first-time, low-income mothers;
- g. A description of the collaboration between the applicant and other entities providing similar services to the same population, including plans for coordination and a description of how the program will fit in with and complement the community's efforts to meet the needs of the target population, if applicable;

- h. A plan for hiring and retaining qualified staff that represents the community's racial and cultural diversity;
- i. A description of the applicant's capacity to comply with and monitor the implementation of the grant requirements;
- j. Summary of the major strengths of the applicant and the community that will lead to successful implementation of the program;
- k. A statement as to whether the applicant plans to work collaboratively with other entities in either administering the program or through an oversight board, and whether the other entities are other counties, municipalities, agencies, or organizations; and
- l. If an applicant currently provides services in compliance with rule sections 1.406 through 1.409, using funding other than from the Nurse Home Visitor Program Fund, the applicant shall state if:
 - 1) The applicant expects to continue to receive funding from such alternative funding source; and
 - 2) Funds received pursuant to these rules will be used to increase the number of clients served.

3. Applications for Multiple Community Collaboration

If multiple communities with lower birth rates need to collaborate to meet the one hundred (100) family requirement, the applicant shall provide specific plans that address the mechanisms and history of the collaboration in addition to complying with the requirements of rule sections 1.402(A)(1) and (2). The plan shall include, but not be limited to, examples of previous collaborations.

4. Applications for Expansion Sites

In addition to complying with the requirements of rule section 1.402(A)(1), each expansion site shall submit the following in its application:

- a. Confirmation that the entity has implemented the program in compliance with these rules;
- b. A description of additional community demand for the program that is not being met through the current funding;
- c. A specific plan for building additional infrastructure to support the expansion of the program including, but not limited to, physical space, staff supervision, and computer data entry personnel;
- d. A description of how the implementing entity has addressed previous specific challenges relating to the program;
- e. A plan describing the implementing entity's strategy to recruit and train sufficient qualified nurses to implement and expand the program; and
- f. A description of community support for the planned expansion of the program.

B. Timelines for Grant Applications

Grant applications may be solicited up to two (2) times each fiscal year.

1.403 REVIEW OF APPLICATIONS

- A. The state department shall conduct an initial technical review of submitted applications to ensure that all required components are included.
- B. After the state department's technical review of the applications, the health sciences facility shall review the applications and shall select a list of entities that the health sciences facility recommends to administer the program in communities throughout the state.
- C. The state department shall review the budget and budget justification in the application of each selected entity and provide technical assistance to ensure an accurate budget to support implementation in accordance with program requirements.

1.404 CRITERIA FOR SELECTION OF ENTITIES

- A. At a minimum, the following criteria shall be used for selecting potential grantees:
 - 1. The applicant meets the definition of an "entity" as defined in rule section 1.401(D);
 - 2. The entity submits a completed application in accordance with the requirements of rule section 1.402;
 - 3. The entity demonstrates the capacity and ability to adequately administer and implement the program;
 - 4. The entity demonstrates that it will comply with the requirements of rule sections 1.406 through 1.408;
 - 5. The entity's geographic service area and/or the population it serves advances the implementation of the program in communities throughout the state; and
 - 6. The entity is selected on a competitive basis.
- B. More than one (1) entity may receive funding in a particular community if it can demonstrate in its application:
 - 1. Broad community support for the implementing entity;
 - 2. Existence of a sufficient number of eligible women to support multiple implementing entities;
 - 3. Existence of close coordination and mutual support between the entities; and
 - 4. A specific plan for the coordination by the applying entity and other nurse home visitation programs in the community.
- C. Special consideration shall be given to entities that are proposing to administer the program as a collaborative effort among multiple entities.

1.405 AWARDING OF PROGRAM GRANTS

- A. The Executive Director or Designee shall approve grants and award funding to the entities selected on a competitive basis by the health sciences facility.
- B. The grant awards may, at a minimum, include monies to fund:
 - 1. Reasonable and necessary salaries and benefits for nurses, nurse supervisors, and data entry employees;
 - 2. Reasonable and necessary operating costs, including but not limited to, medical, program and office supplies, telephones, computer equipment, mileage reimbursement, any required insurance, and staff development;
 - 3. Reasonable and necessary training, training materials and travel costs associated with obtaining training required by rule section 1.406(A);
 - 4. Reasonable and necessary cost for purchasing the management information system, and any related technical assistance; and
 - 5. Reasonable and necessary costs for developing any infrastructure necessary for program administration and implementation.

1.406 PROGRAM REQUIREMENTS

A. Training Requirements

Each nurse employed by an entity to provide nurse home visiting services through the Nurse Home Visitor Program shall be required, at a minimum, to attend and complete the following training:

- 1. Preparatory study educating nurse home visitors on their nurse home visitor role and competencies, including:
 - a. Applying theories and principles integral to implementation of the Nurse-Family Partnership Model. (2019), herein incorporated by reference. No later editions or amendments are incorporated. A copy of the principles are available from the U.S. Department of Health and Human Services, Administration of Children & Families, at [https://homvee.acf.hhs.gov/implementation/Nurse-Family%20Partnership%20\(NFP\)%C2%AE/Model%20Overview](https://homvee.acf.hhs.gov/implementation/Nurse-Family%20Partnership%20(NFP)%C2%AE/Model%20Overview). A copy is also available from the State Department for inspection and copying at 710 S. Ash St., Bldg. C., Denver, CO 80246 during normal business hours.
 - b. Using evidence from randomized trials and data collection software to guide and improve practice.
 - c. Delivering individualized client care across the six (6) domains of Personal Health, Environmental Health, Life Course, Maternal Role, Friends and Family, and Health and Human Services.
 - d. Establishing therapeutic relationships with clients.
 - e. Utilizing reflective process to improve practice.
- 2. Interactive training where nurse home visitors receive instruction and assistance to begin applying information. This training prepares new nurses to implement the intervention with fidelity to the Nurse-Family Partnership Model.

3. Training to give nurses an opportunity to deepen their understanding of the Nurse-Family Partnership Model, specifically regarding:
 - a. Infant temperament;
 - b. Motivational interviewing; and
 - c. Fidelity to the model elements.

B. Visit Protocols

The visit protocols followed by the entity in administering the program shall cover information specific to prenatal, infant, and toddler phases. The visit protocols shall, at a minimum, address:

1. The physical and emotional health of the mother and the baby, including information for the mother on the importance of nutrition and avoiding alcohol and drugs, including nicotine;
2. The environmental health issues such as ensuring a safe environment for the child;
3. The life course development for the mother, including employment, educational achievement, budgeting and financial planning, transportation and housing;
4. The parental role and responsibilities; and
5. The role of family and friends in supporting goal attainment.

C. Program Management Information Systems

The management information system used by the entity in administering and implementing the program shall, at a minimum, include the following:

1. Documentation of the services received by clients enrolled in the program;
2. Information to assist the program staff in tracking the progress of families in attaining program goals;
3. Information to assist nurse supervisors in providing feedback to individual nurse home visitors on strengths and areas for improvement in implementing the program; and
4. Information to assist program staff in planning quality improvements to enhance program implementation and outcomes.

D. Reporting and Evaluation System

1. At least once (1 time) every month, each implementing entity shall submit the data generated by the management information system required by rule section 1.406(C), to the health sciences facility.
2. The data will be analyzed and the health sciences facility shall make available, on no less than a quarterly basis, a report to the entity evaluating the program's implementation, and on a semi-annual basis shall also make available reports on benchmarks of program outcomes.

3. The implementing entity shall submit an annual report that complies with the requirements in rule section 1.411 to both the health sciences facility and the community in which the entity implements the program that reports on the effectiveness of the program within the community.
4. The annual report shall be submitted on or before March 1, or not later than sixty (60) days after the end of the fiscal year for which funding was provided if the program has not submitted a request for continuation of funding. The annual report shall be written in a manner that is understandable for both the health sciences facility and members of the community that the program serves.

1.407 STAFFING REQUIREMENTS

- A. For every one hundred (100) low-income, first-time mothers enrolled in the program, the program shall, at a minimum, have the following staff:
 1. Four (4) full time equivalent (FTE) nurses;
 2. One (1) half FTE nurse supervisor, and
 3. One (1) half FTE data entry/clerical support person.
- B. The data entry/clerical support person shall provide office support to the nursing staff and assure data are submitted as required by rule sections 1.406(C) and (D).
- C. The caseload for any one (1) nurse at one (1) time shall not exceed twenty-five (25) low-income, first-time mothers.

1.408 ELIGIBILITY OF CLIENTS

- A. At a minimum, the following is required to be eligible to receive program services:
 1. A mother with an annual income that does not exceed two hundred percent (200%) of the federal poverty line;
 2. No previous live births; and
 3. Enrolled in the program during pregnancy or prior to the end of the first (1st) month of the baby's life.
- B. Preference will be given to mothers who enroll in the program prior to the twenty-eighth (28th) week of pregnancy.

1.409 NUMBER OF CLIENTS SERVED; WAIVER

- A. Except as provided in rule section 1.409(B), each entity shall provide services to a minimum of one hundred (100) low-income, first-time mothers in the community in which the program is administered and implemented.
- B. Small Community Size:
 1. If the population base of a community does not have the capacity to enroll one hundred (100) eligible families, an entity may apply to the state department for a waiver from this requirement.

2. Prior to granting any waivers, the state department shall consult with the health sciences facility to ensure that the entity can implement the program within a smaller community and comply with program requirements.

1.410 AVAILABILITY OF FUNDING FOR ALTERNATIVE NURSE HOME VISITATION PROGRAMS

- A. An alternative nurse home visitation program may qualify for funding under the nurse home visitor program, if the alternative nurse home visitation program:
 1. Has been in operation in the state as of July 1, 1999, for a minimum of five (5) years;
 2. Has achieved a significant reduction in each of the following:
 - a. Infant behavioral impairments due to use of alcohol and other drugs, including nicotine;
 - b. The number of reported incidents of child abuse and neglect among families receiving services;
 - c. The number of subsequent pregnancies by mothers receiving services;
 - d. The receipt of public assistance by mothers receiving services; and
 - e. Criminal activity engaged in by mothers receiving services and their children.
- B. Any alternative nurse home visitation program qualifying for funding under this section shall be exempt from the requirements of rule section 1.406, if it continues to demonstrate significant reductions in the occurrences specified in rule section 1.410(A)(2).
- C. Any alternative nurse home visitation program qualifying for funding under this section shall comply with the requirements of rule section 1.411.

1.411 REPORTING REQUIREMENTS FOR TOBACCO SETTLEMENT PROGRAMS

- A. All programs shall annually submit to the state department a report which, at a minimum, includes the following information:
 1. The amount of master settlement agreement moneys, as described in section 26.5-3-503(4), C.R.S., received by the program for the preceding fiscal year;
 2. A description of the program, including the program goals, population served by the program, the actual number of people served, and the services provided; and
 3. An evaluation of the operation of the program, which includes the effectiveness of the program in achieving its stated goals.

1.412 CONFLICTS OF INTEREST

- A. Applicability

Except as provided for in sections 26.5-3-505 through 26.5-3-508, C.R.S., regarding the health sciences facility, this section applies to any person involved in:

1. The review of completed applications; or

2. Making recommendations to the state department regarding an entity that may receive a grant and the amount of said grant.

B. Prohibited Behavior

No person who is involved in the activities specified in rule section 1.412(A), shall have a conflict of interest. Such conflict of interest includes, but is not limited to, any conflict of interest involving the person and the grantee, or the person and the tobacco industry.

C. Responsibilities of Persons with a Potential Conflict of Interest

A person who believes that they may have a conflict of interest must disclose such conflict of interest as soon as they become aware of the conflict of interest, and shall disclose the conflict of interest in writing to the state department. If the state department determines the existence of a conflict of interest, the person must recuse themselves from any of the activities specified in rule section 1.412(A), relating thereto.

1.413 CRITERIA FOR REDUCTION OR CESSATION OF FUNDING

- A. Upon recommendation from the health sciences facility, the state department may reduce or eliminate the funding of a program if the entity is not operating the program in accordance with the program requirements established in rule sections 1.406 through 1.408, except as provided in rule section 1.410, or is operating the program in such a manner that it does not demonstrate positive results.
- B. An entity shall receive written notification from the state department if the entity's funding is subject to reduction or elimination.
- C. Any reduction or elimination in funding is subject to the due process requirements outlined in section 24-4-105, C.R.S.

Editor's Notes

History

New rules 1.100-1.307 eff. 07/15/2023.

New rules 1.103 and 1.400-1.413 eff. 02/14/2024.

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Tracking number: 2023-00759

Opinion of the Attorney General rendered in connection with the rules adopted by the
General Early Childhood Administration and Programs

on 12/18/2023

8 CCR 1401-1

GENERAL EARLY CHILDHOOD RULES AND REGULATIONS

The above-referenced rules were submitted to this office on 12/20/2023 as required by section 24-4-103, C.R.S. This office has reviewed them and finds no apparent constitutional or legal deficiency in their form or substance.

January 04, 2024 09:46:09

Philip J. Weiser
Attorney General
by Kurtis Morrison
Deputy Attorney General

Permanent Rules Adopted

Department

Department of Early Childhood

Agency

Division of Early Learning, Licensing, and Administration

CCR number

8 CCR 1402-1

Rule title

8 CCR 1402-1 CHILD CARE FACILITY LICENSING RULES AND REGULATIONS 1 -
eff 02/14/2024

Effective date

02/14/2024

COLORADO DEPARTMENT OF EARLY CHILDHOOD

Division of Early Learning, Licensing, and Administration

CHILD CARE FACILITY LICENSING RULES AND REGULATIONS

8 CCR 1402 1

...

2.700 RULES REGULATING NEIGHBORHOOD YOUTH ORGANIZATIONS

2.701 AUTHORITY

These rules and regulations are adopted pursuant to the rulemaking authority provided in section 26.5-1-105(1), C.R.S., and are intended to be consistent with the requirements of the State Administrative Procedure Act, section 24-4-101, C.R.S., et seq. (the “APA”), the Anna Jo Garcia Haynes Early Childhood Act, section 26.5-1-101, C.R.S., et seq. (the “Early Childhood Act”), and the Child Care Licensing Act, section 26.5-5-301, C.R.S., et seq.

The specific rulemaking authorities granted for Neighborhood Youth Organizations include section 26.5-5-308(2), C.R.S.

2.702 SCOPE AND PURPOSE

The Colorado Department of Early Childhood, Division of Early Learning, Licensing, and Administration is responsible for the administration of health and safety rules and requirements for licensed child care facilities. These rules outline the requirements for Neighborhood Youth Organizations. These rules shall govern the health and safety requirements for licensed Neighborhood Youth Organizations. All Neighborhood Youth Organizations must comply with the “Rules Regulating Neighborhood Youth Organizations” in rule section 2.700; “General Rules Regulating Child Care Facilities” in rule section 2.100; and “Rules Regulating Special Activities” in rule section 2.600.

2.703 APPLICABILITY

The provisions of these rules and regulations shall be applicable to nonprofit organizations that provide programs and services to children, youth, and families through comprehensive wraparound supports to ensure positive growth and development during childhood and adolescence, and is designed to serve youth as young as five (5) years of age who are enrolled in kindergarten and as old as eighteen (18) years of age.

2.704 DEFINITIONS

- A. “Employee” means a paid employee of a Neighborhood Youth Organization who is eighteen (18) years of age or older.
- B. “Neighborhood Youth Organization” means a nonprofit organization that provides programs and services, as described in section 26.5-5-308, C.R.S., to children, youth, and families through comprehensive wraparound supports to ensure positive growth and development during childhood and adolescence, and is designed to serve youth as young as five (5) years of age who are enrolled in kindergarten and as old as eighteen (18) years of age.

1. These activities must occur primarily in a facility leased by, granted access or use to, or owned by the Neighborhood Youth Organization. The activities must occur in an environment in which youth have written parent or guardian consent to become a youth member of the Neighborhood Youth Organization, and to participate in the programs and services of the Neighborhood Youth Organization.
 2. A Neighborhood Youth Organization does not include faith-based centers, organizations or programs operated by state or city parks or special districts, or departments or facilities that are currently licensed as child care centers as defined in rule section 2.203(B) of the "Rules Regulating Child Care Centers.
- C. "Nonprofit Organization" means an organization that is exempt from taxation pursuant to section 501(c)(3) of the Federal "Internal Revenue Code of 1986", 26 U.S.C. sec. 501, as amended.
- D. "Volunteer" means a person who volunteers assistance to a Neighborhood Youth Organization and who is eighteen (18) years of age or older.
- E. "Youth member" means a youth who is five years of age and enrolled in kindergarten or who is older than five years of age and up to eighteen years of age whose parent or legal guardian has provided written consent for the youth to participate in the activities of a neighborhood youth organization..
- F. A "Youth Employee" is a paid staff member of a Neighborhood Youth Organization who is between the ages of fourteen (14) and seventeen (17) years, and does not have unsupervised contact with youth.

POLICIES AND PROCEDURES

2.705 STATEMENT OF POLICIES AND PROCEDURES

- A. Each Neighborhood Youth Organization is required to have a written mission statement. This statement must be kept on file, updated periodically, and made known to employees and parent(s)/guardian(s), and must be available during licensing inspections.
- B. The Neighborhood Youth Organization shall post its policies and procedures in plain view, and must make a written copy available to parents and guardians, which must include the following:
1. The address of the licensed Neighborhood Youth Organization, general hours of operation, and policy regarding closure of the Neighborhood Youth Organization;
 2. The Neighborhood Youth Organization's mission statement;
 3. The ages of youth members accepted;
 4. The enrollment procedure for a youth member that at a minimum includes: the youth member's name, date of birth, parent/guardian contact information, emergency contact information, and written authorization to attend;
 5. The procedures for:
 - a. Arrival and departure from the Neighborhood Youth Organization;
 - b. Notification of parents and guardians, for handling emergencies;
 - c. Youth member's personal belongings and money;

- d. Filing a complaint against the Neighborhood Youth Organization; and,
 - e. Background checks and other criminal history checks of employees and volunteers;
- 6. The policies on:
 - a. Guidance;
 - b. Visitors;
 - c. Meals and snacks; and
 - d. The reporting of child abuse (see rule section 2.122 of the “General Rules for Child Care Facilities”);
- 7. If services are offered for special needs youth members that the Neighborhood Youth Organization operates in compliance with rule section 2.115 of the “General Rules Regulating child Care Facilities;”
- 8. An itemized fee schedule; and
- 9. The role of the governing board.
- C. The fee for obtaining a Neighborhood Youth Organization license can be found in rule section 2.111 of the “General Rules Regulating Child Care Facilities.”

2.706 COMMUNICATION, EMERGENCY AND SECURITY PROCEDURES

- A. During the hours the Neighborhood Youth Organization is in operation, the Neighborhood Youth Organization must provide an office and/or monitored telephone number known to the public and available to parent(s)/guardian(s) in order to provide immediate access to the Neighborhood Youth Organization.
- B. The Neighborhood Youth Organization must have a working telephone with the number available to the public.
- C. The Neighborhood Youth Organization must have an established means of communication between employees and the program office when youth members are being transported or are away from the permanent site on a field trip.
- D. Emergency telephone numbers must be posted at each permanent site and taken on all field trips and during mobile Neighborhood Youth Organization programs. The emergency numbers shall include, at a minimum, emergency 911, or rescue unit telephone number if 911 is not available. Phone numbers are also required for the clinic or hospital nearest to the activity location; ambulance service; local fire, police, and health departments; and, Rocky Mountain Poison Control.
- E. The Neighborhood Youth Organization must have a written emergency procedure for the reporting of communicable illnesses to the local health department pursuant to regulations of the Colorado Department of Public Health and Environment. The complete list of reportable communicable illnesses can be found in 6 CCR 1009-1 (Apr. 19. 2023), rules and regulations pertaining to Epidemic and Communicable Disease Control, herein incorporated by reference. No later editions or amendments are incorporated. These regulations are available at no cost from the Colorado Department of Public Health and Environment at <http://sos.state.co.us/ccr>. These

regulations are also available for public inspection and copying at the Department at 710 S. Ash St., Bldg. C., Denver, CO 80246, during normal business hours .

- F. The Neighborhood Youth Organization must be able to provide emergency transportation to a health care facility at all times either via program vehicle or the emergency medical services system.
- G. The director of the Neighborhood Youth Organization or the director's delegated substitute must have a means for determining at all times who is present at the Neighborhood Youth Organization.
- H. A written policy regarding visitors to the Neighborhood Youth Organization must be posted and a record maintained daily by the Neighborhood Youth Organization that includes, at a minimum, the visitor's name, phone number, and purpose of the visit.
- I. Each Neighborhood Youth Organization must have a written plan for action in case of emergencies, including, but not limited to: floods, tornadoes, severe weather, injuries, and how youth will be evacuated to a safe area. This plan must be on file at the Neighborhood Youth Organization. Neighborhood Youth Organization employees must have received training from the Neighborhood Youth Organization regarding the implementation of the plan prior to assuming supervisory responsibility for youth. Written verification of the training shall be in the employees personnel file.

RECORDS

2.707 ADMINISTRATIVE RECORDS AND REPORTS

- A. Each Neighborhood Youth Organization must develop a system of gathering, recording, and responding to complaints.
- B. The following records must be on file at the Neighborhood Youth Organization:
 - 1. Records of enrollment, daily attendance for each youth, and daily record of time each youth member arrives at and departs from the Neighborhood Youth Organization.
 - 2. Current Colorado Department of Public Health and Environment or local health department inspection report within the past twenty-four (24) months.
 - 3. Current local fire department inspection report issued within the past twenty-four (24) months.
 - 4. A list of current employees and volunteers either available on site or on file at a central location.
 - 5. A record of all emergency drills held over the past twelve (12) months, including date and time of drill, number of adults and youth members participating, and the amount of time taken to evacuate.
 - 6. Records of reports of communicable illness made to the Colorado Department of Public Health and Environment or local public health agency.
 - 7. A record of visitors to the Neighborhood Youth Organization

- C. The Neighborhood Youth Organization shall submit to the Department as soon as possible but not later than twenty-four (24) hours after the critical incident a written report about any critical incident. Such report shall indicate:
1. The youth member's name, birth date, address, and telephone number;.
 2. The names of all involved and witnesses to the incident, the youth member's parents or guardians, and their address and telephone number(s) if different from those of the youth member;.
 3. Date of the incident;.
 4. Brief description of the incident; and
 5. Documentation of action taken and/or the name and address of the police department or authority if a report was made.

2.708 CONFIDENTIALITY AND RECORD RETENTION

- A. The Neighborhood Youth Organization shall maintain complete records of youth members and employees as required in rule sections 2.208 and 2.209 of the "Rules Regulating Child Care Centers that Provide Less than 24-hour Care."
- B. The confidentiality of all employee and youth member's records shall be maintained, pursuant to rule section 2.124 of the "General Rules for Child Care Facilities."
- C. Employee and youth member's records must be available, upon request, to authorized personnel of the Department.
- D. If records for an organization with more than one Neighborhood Youth Organization are kept in a central file, duplicate identifying and emergency information for both employees and youth members must also be kept on file at the Neighborhood Youth Organization attended by the youth members and where the employee is assigned.
- E. The records of youth members and employees must be maintained by the Neighborhood Youth Organization for at least three (3) years.
- F. Neighborhood Youth Organizations must cooperate with all state and local investigations regarding incidents, including but not limited to, licensing violations, child abuse, and incidents affecting the health, safety, and welfare of youth members.

NEIGHBORHOOD YOUTH ORGANIZATION SERVICES

2.715 ADMISSION PROCEDURE

- A. Prior to attendance, the parent(s) or guardian(s) must provide signed authorization for the youth member to participate in the programs and services of the Neighborhood Youth Organization.
- B. The Neighborhood Youth Organization can only accept youth members of the ages for which it has been licensed. At no time shall the number of youth members in attendance exceed the number for which the Neighborhood Youth Organization has been licensed.
- C. Admission procedures must be completed prior to the youth member's attendance at the Neighborhood Youth Organization, and must include completion of the registration information for inclusion in the youth member's record, as required in rule section 2.708.

2.716 GUIDANCE AND DISCIPLINE

- A. Corporal punishment as defined in section 22-1-140, C.R.S. (2023), is not allowed.
- B. Separation, when used as guidance or discipline, must be brief and appropriate for the youth member's age and circumstances. The youth member must be in a safe, lighted, well-ventilated area and be within hearing and vision of an employee. The youth member must not be isolated in a locked room, bathroom, closet, or pantry.
- C. Verbal abuse or derogatory remarks about the youth member is not permitted.
- D. Authority to provide discipline must not be delegated to other youth members or youth employees.
- E. Youth members must not be denied food or water as a form of guidance or discipline.

2.709 YOUTH RECORDS

- A. The Neighborhood Youth Organization site or Neighborhood Youth Organization's central headquarters must maintain and update annually a record for each youth member that includes:
 - 1. The youth member's full name, age, current address, date of birth, and enrollment date.
 - 2. Names, addresses, telephone numbers, and e-mail addresses of parents or guardians.
 - 3. Any special instructions as to how the parents or guardians can be reached during the hours the youth member is at the Neighborhood Youth Organization.
 - 4. Names, addresses, and telephone numbers of persons who can assume responsibility for the youth member in the event of an emergency if parents or guardians cannot be reached immediately.
 - 5. A dated, written authorization by a parent or guardian for:
 - a. The youth members to attend and be a member of the Neighborhood Youth Organization and to arrive and depart without parental or guardian supervision.
 - b. Emergency medical care signed and submitted annually by the parent or guardian.
 - c. Signed authorization for the Neighborhood Youth Organization to provide transportation to and from the Neighborhood Youth Organization.
 - d. Signed authorization for the youth member to participate in field trips.
 - 6. Reports of critical incidents including, but not limited to, serious injuries and accidents occurring during care that result in medical attention, admission to the hospital, or death of a youth member.
 - 7. The parent(s) or guardian(s) must provide a self-reported, complete health history for the youth member, including communicable diseases, chronic illnesses or injuries, immunization history, known drug reactions or allergies, medication records, special dietary needs, and health care plans.

2.710 EMPLOYEE RECORDS

- A. The Neighborhood Youth Organization must maintain a record for each adult employee, paid or volunteer, that includes the following:
 - 1. Name, address, and birth date of the individual.
 - 2. The date that the employee began employment with the Neighborhood Youth Organization.
 - 3. Name, address, daytime telephone number, and e-mail address of the person(s) to be notified in the event of an emergency.
 - 4. Record and verification of the employee's training, education, and experience.
 - 5. Copies of First-Aid and Cardiopulmonary Resuscitation (CPR) certification or other certification confirming the qualifications for the responsibilities assumed at the Neighborhood Youth Organization, which may include copies of driver's licenses, college transcripts, and diplomas.
 - 6. Training completion certificates.
 - 7. Trails child abuse and neglect records request and a criminal record check request for all employees must be completed the results must be on file at the Neighborhood Youth Organization or the Neighborhood Youth Organization's headquarters pursuant to rule sections 2.120 and 2.121 of the "General Rules for Child Care Facilities."
- B. Each employee's personnel file must contain all required information within thirty (30) calendar days of the first day of employment.

PERSONNEL

2.711 GENERAL REQUIREMENTS FOR ALL PERSONNEL

- A. All employees and volunteers of the Neighborhood Youth Organization must demonstrate an interest in and knowledge of youth development and concern for youth members' well-being.
- B. All employees and volunteers must not engage in conduct that would endanger the health, safety, or well-being of youth members.
- C. All employees and volunteers must not consume or be under the influence of any substance that impairs their ability to care for youth members at the Neighborhood Youth Organization.

2.712 PERSONNEL POLICIES

- A. The duties and responsibilities of each employees position and the lines of authority and responsibility within the Neighborhood Youth Organization must be in writing.
- B. At the time of employment, employees must be informed of their duties and assigned a supervisor.
- C. Prior to working with youth members, each employee must read and be instructed about the policies and procedures of the Neighborhood Youth Organization, including those relating to proper supervision of youth members and reporting of child abuse. Employees must sign a statement indicating that they have read and understand the Neighborhood Youth Organization's policies and procedures.

2.713 TRAINING

- A. All employees must complete a pre-service building and physical premises safety training prior to working with youth members. This training must include identification of and protection from hazards that can cause bodily injury such as electrical hazards, bodies of water, vehicular traffic, handling and storage of hazardous materials, and the appropriate disposal of bio contaminants.
 - 1. The training is developed and facilitated by the Neighborhood Youth Organization for employees to identify program-specific environmental hazards. Employees must be retrained if there are changes to the building and physical premises.
- B. All employees must complete the Department-approved standard precautions training prior to working unsupervised with children. This training must be renewed annually.
- C. For every thirty (30) or fewer youth members in attendance, there must be at least one (1) employee on duty who holds a current Department-approved first aid and safety certificate (including Cardiopulmonary Resuscitation (CPR) for all ages of youth) and is responsible for administering first aid and CPR to youth members. Such individuals must be with the youth members at all times when the Neighborhood Youth Organization is in operation. If youth members are at different locations, there must be a first aid and CPR qualified employee at each location.
- D. Within thirty (30) calendar days of employment, all employees caring for youth members who are not required by rule to be certified in first aid and CPR, must complete the Department-approved introduction to first aid and CPR module. The module must be renewed every two (2) years.
- E. Within thirty (30) calendar days of employment, all employees and regular volunteers must be trained using a Department-approved training about child abuse prevention, which includes common symptoms and signs of child abuse, how to report, where to report, and when to report suspected or known child abuse or neglect. This training must be renewed annually.

2.714 VOLUNTEERS AND VISITORS

- A. There must be a clearly established policy for volunteers regarding their function, orientation, training, and supervision.
- B. Volunteers must have qualifications suitable to the tasks assigned and be appropriately trained for the position.
- C. Individuals who volunteer less than five (5) days per month must be directly supervised by a program director or program leader and cannot be left alone with youth members.
- D. Individuals who volunteer more than five (5) days per month must have the same background checks as employees, pursuant to rule sections 2.120 and 2.121 of the "General Rules Regulating Child Care Facilities," and do not need to be directly supervised with youth members.
- E. Visitors must always be supervised by an employee.

NEIGHBORHOOD YOUTH ORGANIZATION SERVICES

2.715 ADMISSION PROCEDURE

- A. Prior to attendance, the parent(s)' or legal guardian('s) must provide signed authorization for the youth member to participate in the programs and services of the Neighborhood Youth Organization arrive or depart without parental or legal guardian supervision shall be obtained.

- B. The Neighborhood Youth Organization can only accept youth members of the ages for which it has been licensed. At no time shall the number of youth members in attendance exceed the number for which the Neighborhood Youth Organization has been licensed certified by the fire department.
- C. Admission and membership procedures must be completed prior to the youth member's attendance at the Neighborhood Youth Organization, and must include completion of the registration information for inclusion in the youth member's record, as required in rule section 2.709.

2.716 GUIDANCE AND DISCIPLINE

- A. Corporal or other harsh punishment as defined in section 22-1-140(2)(a), C.R.S. (2023), including, but not limited to, pinching, shaking, spanking, punching, biting, kicking, rough handling, hair pulling, or any humiliating or frightening method of guidance shall is not be allowed.
- B. Separation, or time-out, when used as guidance or discipline, must be brief and appropriate for the youth member's age and circumstances. The youth member must be in a safe, lighted, well-ventilated area and be within hearing and vision of a staff member. The youth member must not be isolated in a locked room, bathroom, closet, or pantry.
- C. Verbal abuse or derogatory remarks about the youth member are not permitted.
- D. Authority to provide guidance and/or discipline must not be delegated to other youth members or youth employees.
- E. Youth members must not be denied food or water as a form of guidance or discipline.

PROGRAM ACTIVITIES

2.717 FIELD TRIPS

- A. The program may include field trips, where youth members and employees leave the Neighborhood Youth Organization to visit sites in the community.
 - 1. Youth members must be actively supervised at all times.
 - 2. An accurate itinerary must remain at the headquarters, office, primary, or temporary site of the Neighborhood Youth Organization.
 - 3. During a field trip, the employees must have the following information with them:
 - a. Each youth member's emergency contact information; and
 - b. The written authorization from parent(s) or guardian(s) for emergency medical care.
- B. During a field trip, a list of all youth members and employees on the field trip shall be kept at the headquarters or site of the Neighborhood Youth Organization.
- C. During all field trips, employees must bring a First Aid kit.
- D. During all field trips, youth members must have access to water and toilet facilities.

- E. During all field trips, employees must carry with them information regarding the nearest health care facility.
- F. Field trip locations must be accessible to emergency medical service.

2.718 TRANSPORTATION

- A. Transportation provided by the Neighborhood Youth Organization
 - 1. The Neighborhood Youth Organization is responsible for any youth members it transports.
 - 2. The Neighborhood Youth Organization must obtain written permission from parents or guardians for any transportation of their youth member.
 - 3. Youth members must not be permitted to ride in the front seat of a vehicle.
 - 4. Youth members must be loaded and unloaded out of the path of moving vehicles.
 - 5. Youth members must remain seated while the vehicle is in motion. Youth members must not be permitted to stand or sit on the floor of a moving vehicle and their arms, legs, and heads shall remain inside the vehicle at all times.
 - 6. Prior to a field trip or other excursion, the Neighborhood Youth Organization shall obtain information on liability insurance from parent(s)/guardian(s) and employees who transport youth members in their own cars and verify that all drivers have valid driver's licenses.
 - 7. Attendance must be verified as youth members enter and exit the vehicle to ensure all youth members are accounted for.
- B. Requirements for Vehicles
 - 1. Any vehicle used for transporting youth members to and from the Neighborhood Youth Organization or during program activities shall meet the following requirements:
 - a. The vehicle must be enclosed and have working door locks.
 - b. The seats of the vehicle must be constructed and installed according to the vehicle manufacturer's specifications.
 - c. The vehicle must be kept in satisfactory condition to assure the safety of occupants.
 - d. The Neighborhood Youth Organization must not transport more youth members than any vehicle is able to safely accommodate when child restraint systems and seat belts are properly installed in the vehicle; and;
 - e. Modifications to vehicles including, but not limited to, the addition of seats and seat belts must be completed by the manufacturer or an authorized representative of the manufacturer. Documentation of such modifications must be available for review.
 - 2. Any child transported must be properly restrained in a child restraint system that meets the requirements of the Colorado child passenger safety law laws at sections 42-4-236 and 42-4-237, C.R.S., that requires:

- a. Youth members under eight (8) years of age who are being transported, must be properly restrained in a child restraint system, according to the vehicle and child restraint system manufacturer's instructions.
 - b. Youth members who are at least eight (8) years of age but less than sixteen (16) years of age that are being transported, must be properly restrained in a safety belt or child restraint system according to the vehicle and child restraint system manufacturer's instructions.
 - (1) Children who meet the requirements to be restrained in a safety belt must be instructed and monitored to keep the seat belt properly fastened and adjusted.
 - c. Two (2) or more youth members must never be restrained in one (1) seat belt or child restraint system.
- 3. In vehicles with a manufacturer's established capacity of sixteen (16) or more passengers, seat belts for passengers are not required, but shall be used if provided.
- 4. There must be a First-Aid kit in all vehicles.
- C. Requirements for Drivers of Vehicles
 - 1. All drivers of vehicles transporting youth members must operate the vehicle in a safe and appropriate manner.
 - 2. All drivers of vehicles owned or leased by the Neighborhood Youth Organization in which youth members are transported must have a current Department-approved First Aid and safety certificate that includes Cardiopulmonary Resuscitation (CPR) for all ages of youth.
 - 3. The driver must ensure that a complete First-Aid Kit is in the vehicle.
 - 4. The driver must ensure that all doors are secured at all times when the vehicle is moving.
 - 5. The driver must make a good-faith effort to ensure that each youth member is properly belted throughout the trip.
 - 6. The driver must not eat or use a cellular or other mobile device while driving.
 - 7. All drivers must be at least twenty (20) years of age.
 - 8. Drivers must complete a minimum of four (4) hours of driver training prior to transporting youth members. The driver training curriculum may be developed and administered by the Neighborhood Youth Organization and must include at a minimum: behind the wheel training; participant transport attendance procedures, including taking attendance at the destination; managing behavioral issues; loading and unloading procedures; daily vehicle inspection procedures; proper tire inflation; emergency equipment and how to use it; accident procedures; passenger illness procedures; procedures for backing up; and vehicle evacuation.
 - a. Documentation of driver training must be available for review.

BUILDING AND FACILITIES

2.719 FACILITY REQUIREMENTS

Each Neighborhood Youth Organization must maintain and post the appropriate fire and health inspection certificates.

2.720 FIRE AND OTHER SAFETY REQUIREMENTS

A. General Requirements

1. Buildings must be kept in good repair and maintained in a safe condition.
2. Major cleaning involving the use of household or industrial cleaners is prohibited in rooms presently occupied by youth members.
3. Volatile substances such as gasoline, kerosene, fuel oil, oil-based paints, and other hazardous items must be stored away from the area used for youth members and be inaccessible to youth members.
4. Employees and volunteers are prohibited from carrying firearms and explosives on the licensed premises, both indoor and outdoor, and in any vehicle in which youth members are transported.
5. Combustibles such as cleaning rags, mops, and cleaning compounds must be stored in well-ventilated areas separated from flammable materials and stored in areas inaccessible to youth members.
6. Closets, attic, basement, cellar, furnace room, and exit routes must be kept free from accumulation of extraneous materials that could cause or fuel a fire or hinder an escape or evacuation.
7. All heating units, whether gas or electric, must be installed and maintained with safety devices to prevent fire, explosions, and other hazards. No open-flame gas or oil stoves, unscreened fireplaces, hot plates, or unvented heaters may be used for heating purposes. All heating elements, including hot water pipes, must be insulated or installed in such a way that youth members cannot come into contact with them. Nothing flammable or combustible may be stored within three (3) feet of a hot water heater or furnace.
8. Indoor and outdoor equipment, materials, and furnishings must be sturdy, safe and free of hazards.
9. Equipment, materials, and furnishings, including durable furniture such as tables and chairs, must be stored in a manner that is safe for youth members.
10. Extension cords cannot be used in place of permanent wiring.
11. Corridors, halls, stairs, and porches must be adequately lighted. Operable battery-powered or solar lights must be provided in locations readily accessible to employees in the event of electric power failure.

B. Emergency and Disaster Preparedness

1. Fire exit drills must be held often enough that all occupants are familiar with the drill procedure and their conduct during a drill is a matter of established routine. Fire drills must be consistent with local fire department procedures.

2. Drills must be held at unexpected times and under varying conditions to simulate the unusual conditions of an actual fire.
3. Drills must emphasize orderly evacuation under proper discipline rather than speed. No running or horseplay should be permitted.
4. Drills must include suitable procedures for ensuring that all persons in the building or all persons subject to the drill participate.
5. Fire alarm equipment must be used regularly in the conduct of fire exit drills.
6. Tornado and emergency evacuation and lock down drills must be held often enough that all occupants are familiar with the drill procedure and their conduct during a drill is a matter of established routine.
7. A record of all emergency drills held over the past twelve (12) months must be maintained at the Neighborhood Youth Organization site, pursuant to rule section 2.705.

...

Editor's Notes

History

Entire rule set re-adopted from 12 CCR 2509-8.

Rule sections 2.700-2.720 eff. February 14, 2024.

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Office of the Attorney General

Tracking number: 2023-00761

Opinion of the Attorney General rendered in connection with the rules adopted by the
Division of Early Learning, Licensing, and Administration

on 12/18/2023

8 CCR 1402-1

CHILD CARE FACILITY LICENSING RULES AND REGULATIONS

The above-referenced rules were submitted to this office on 12/20/2023 as required by section 24-4-103, C.R.S. This office has reviewed them and finds no apparent constitutional or legal deficiency in their form or substance.

January 04, 2024 09:44:24

Philip J. Weiser
Attorney General
by Kurtis Morrison
Deputy Attorney General

Permanent Rules Adopted

Department

Department of Public Safety

Agency

Division of Homeland Security and Emergency Management

CCR number

8 CCR 1507-46

Rule title

8 CCR 1507-46 LAW ENFORCEMENT PUBLIC SAFETY AND CRIMINAL JUSTICE
INFORMATION SHARING GRANT PROGRAM 1 - eff 02/14/2024

Effective date

02/14/2024

**DEPARTMENT OF PUBLIC SAFETY
DIVISION OF HOMELAND SECURITY AND
EMERGENCY MANAGEMENT**

**Law Enforcement Public Safety and
Criminal Justice Information Sharing Grant
Program**

8 CCR 1507-46

STATEMENT OF BASIS, STATUTORY AUTHORITY, AND PURPOSE

The Agency is proposing to repeal this rule. Effective July 2, 2023, section 24-33.5-1617, C.R.S. was repealed, removing the statutory authority and funding for the Grant Program. These rules are no longer necessary and their continuance would cause confusion to stakeholders, grant applicants, and the general public. For these reasons, it is necessary to repeal these adopted rules.

House Bill 19-1073 created the Law Enforcement, Public Safety, and Criminal Justice Information Sharing Grant Program (“Grant Program”) and authorized the Director of the Division of Homeland Security and Emergency Management to promulgate rules as necessary to implement the Grant Program. 24-33.5-1617(2)(d), C.R.S.

~~These rules are therefore promulgated for the purpose of implementing the Grant Program. As required by section 24-33.5-1617(2)(d), C.R.S., these rules include the time frames for applying for grants, the form of the grant program application, the criteria for evaluating the financial need of grant applicants, the time frames for distributing grant money, and requirements for reports from grant recipients. These revised rules amend the period of availability of the grant funds to reach a wider law enforcement audience.~~



Kevin R. Klein
Director, Division of Homeland Security and Emergency Management

December 15, 2023

Date of Adoption/Repeal

Colorado Department of Public Safety
Division of Homeland Security and Emergency Management
8 CCR 1507-46
Law Enforcement Public Safety and Criminal Justice Information Sharing Grant Program

1. Authority

These rules are adopted pursuant to the authority in section 24-33.5-1617, C.R.S. and is intended to be consistent with the requirements of the State Administrative Procedures Act, section 24-4-101, *et seq.* (the "APA").

2. Scope and Purpose

This regulation shall govern the implementation of the Law Enforcement, Public Safety, and Criminal Justice Information Sharing Grant Program (the Grant Program), including the time frames for applying for grants, the form of the Grant Program application, the criteria for evaluating the financial need of grant applicants, the time frames for distributing grant money, and requirements for reports from grant recipients.

3. Applicability

The provisions of this section shall be applicable to all eligible applicants and recipients of Law Enforcement, Public Safety, and Criminal Justice Information Sharing Grant Program funds as provided by law.

4. Definitions

"Award" means financial assistance that provides support to accomplish a public purpose given by the state to an eligible recipient.

"CISC" means the Colorado Information Sharing Consortium created through an intergovernmental agreement effective April 7, 2014, in accordance with section 29-1-203, or its successor organization.

"Grant Program" means the Law Enforcement Public Safety and Criminal Justice Information Sharing Grant Program established by section 24-33.5-1617, C.R.S.

"Local Law Enforcement Agency" means a county sheriff's office, a municipal police department, or a town marshal's office.

"Period of Performance" means the period of time during which the recipient is required to complete the approved activities and to receive and expend approved funds.

"Recipient" means an eligible applicant receiving an award.

5. Program Requirements

5.1 Eligibility

A. Applicant must be a local law enforcement agency, including county sheriff's offices, municipal police departments, or a town marshal's offices.

B. Applicants must submit a complete application developed by the Colorado Division of Homeland Security and Emergency Management, Office of Grants Management in conformance with the application form and instructions and the terms of the Grant Program guidance described below.

C. The Grant Program funds may only be used for the following purposes:

1. The costs associated with connecting to CISC's Information sharing systems that are necessary to allow the recipient to share law enforcement data and intelligence information through CISC including:

- a. ~~Computer hardware~~
- b. ~~Computer software~~
- c. ~~Computer programming~~

D. ~~Grant recipients will enter into contract agreements with the Division. The contract agreement between the State and the recipient(s) will specify additional requirements, including, but not limited to: performance measures, reporting requirements, and monitoring of recipient's activities and expenditures.~~

E. In awarding the grants, the Division will consider the following criteria:

- 1. ~~The financial need of the applicant. Applicants financial need will be evaluated based on their responses and data provided in the grant application.~~
- 2. ~~The applicant's commitment to share all accessible and relevant law enforcement and intelligence information in the applicant's custody.~~
- 3. ~~The applicant's commitment to assume fiscal responsibility for the ongoing annual costs of maintaining data sharing through CISC after the grant money no longer available.~~

5.2 — Award Details

A. ~~Period of Performance: Twelve (12) Months~~

B. Funding Instrument: ~~Discretionary Grant~~

5.3 — Time Frames for Application

A. Time Frames

Application Submission Deadline: ~~May 1, 2021; 5:00 PM MST~~
Grant Period of Performance: ~~12 months from issuance~~

B. Restrictions

- 1. ~~Applications that are not submitted by the stated Application Submission Deadline will not be reviewed or considered for funding.~~

5.4 — Application Submissions

A. ~~Applicants must submit a hard copy of their signed application via U.S. mail and email — an electronic copy of their application as specified in the Grant Program application.~~

5.5 — Grant Guidance

~~The DHSEM Office of Grants Management is responsible for the implementation of this grant program and will develop and publish a grant application and guidance.~~

5.6 — Rule Expiration

A. ~~This section is repealed, effective July 1, 2022 unless extended.~~

5.7 — Inquiries

A. ~~Questions, clarification, or interpretation of this section should be addressed to the Office of Grant Management in the Division of Homeland Security and Emergency Management, 9195 E. Mineral Ave, Suite 234, Centennial, CO 80112, 303-239-4198, Austin.geddis@state.co.us, www.colorado.gov/dhsem.~~

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Office of the Attorney General

Tracking number: 2023-00756

**Opinion of the Attorney General rendered in connection with the rules adopted by the
Division of Homeland Security and Emergency Management**

on 12/15/2023

8 CCR 1507-46

**LAW ENFORCEMENT PUBLIC SAFETY AND CRIMINAL JUSTICE INFORMATION SHARING
GRANT PROGRAM**

The above-referenced rules were submitted to this office on 12/15/2023 as required by section 24-4-103, C.R.S. This office has reviewed them and finds no apparent constitutional or legal deficiency in their form or substance.

January 03, 2024 13:01:22

A blue ink signature of Philip J. Weiser, written in a cursive style.

Philip J. Weiser
Attorney General
by Kurtis Morrison
Deputy Attorney General

Emergency Rules Adopted

Department

Department of Early Childhood

Agency

Administrative Appeals for the Colorado Department of Early Childhood

CCR number

8 CCR 1406-1

Rule title

8 CCR 1406-1 ADMINISTRATIVE APPEALS RULES AND REGULATIONS 1 - eff
12/30/2023

Effective date

12/30/2023

Expiration date

04/16/2024

COLORADO DEPARTMENT OF EARLY CHILDHOOD

Administrative Appeals for the Colorado Department of Early Childhood

ADMINISTRATIVE APPEALS RULES AND REGULATIONS

8 CCR 1406-1

6.100 AUTHORITY

These rules are adopted pursuant to the rulemaking authority provided in sections 26.5-1-105(1)(a), 26.5-2-105(5), 26.5-4-108(1)(a), 26.5-4-111, and 26.5-5-314, C.R.S., and are intended to be consistent with the requirements of the State Administrative Procedures Act, section 24-4-101 through 24-4-204 (APA), C.R.S., and the Anna Jo Garcia Haynes Early Childhood Act (Early Childhood Act), Title 26.5 of the C.R.S.

6.101 SCOPE AND PURPOSE

These rules govern the processes and procedures of administrative appeals for programs and services administered by the Colorado Department of Early Childhood including the County Dispute Resolution Process for the Colorado Child Care Assistance Program, Child Care Licensing determinations and decisions, and the oversight of Local Coordinating Organizations. For rules related to child care provider stringency appeals and materials and hardship waivers pursuant to sections 26.5-5-313 and 314, C.R.S., see rules located at 8 CCR 1402-1 in rule sections 2.114 - 2.118. For rules related to dispute resolutions for Colorado Shines ratings, see rules located at 8 CCR 1401-1 in rule section 1.207. For rules related to dispute resolutions for the Colorado Child Care Assistance Program, see rules located at 8 CCR 1403-1 in rule section 3.144. For rules related to dispute resolution and appeals of the Early Intervention Colorado Program, see rules located at 8 CCR 1405-1, rule sections 5.119 - 5.124.

6.102 APPLICABILITY

The provisions of these rules are applicable to all current or former recipients, applicants, licensees, and administrators of the programs and services administered by the Colorado Department of Early Childhood within the scope of these rules.

6.103 DEFINITIONS

- A. "Administrative Law Judge" or "ALJ" means the same as described in section 24-30-1003, C.R.S.
- B. "Appellant" means the person appealing a county department or Department decisions.
- C. "Applicant" means the adult caretaker(s) or teen parent(s) who sign(s) the Colorado Child Care Assistance Program (CCCAP) application form and/or the redetermination form.
- D. "County Department" means a county department of human or social services as defined by section 26.5-4-103(3), C.R.S.
- E. "Colorado Child Care Assistance Program" (CCCAP) means the public assistance program for child care established in Part 1 of Article 4 of Title 26.5, C.R.S.
- F. "County Dispute Resolution Process" means the dispute resolution process required by section 26.5-4-108(1)(a), C.R.S.

- G. "Department" means the Colorado Department of Early Childhood (CDEC) created in section 26.5-1-104, C.R.S.
- H. "Department Administrative Appeals Unit" references the unit within the Department that acts as the designee for the Executive Director in actions that are administratively appealed, including review of the Administrative Law Judge's Initial Decision, and entering Final Agency Decision affirming, modifying, reversing, or remanding the Initial Decision.
- I. "Final Agency Decision" means the same as a final agency action or order in compliance with the State Administrative Procedure Act, section 24-4-106(2), C.R.S., that determines the rights and obligations of the parties and represents the conclusion of the agency's decision-making process.
- J. Good Cause includes, emergency conditions or circumstances beyond the control of the party seeking the modification such as, but not limited to, impossibility for a party to meet a specified deadline; incapacity of the party or representative; lack of proper notice of the availability of the appeal process; additional time required to obtain documents which were timely requested but not delivered; or other situations which would prevent a reasonable person from meeting a deadline or complying with the process without modification. Good cause does not include: excessive workload of either the party or his/her representative; a party obtaining legal representation in an untimely manner; failure to receive the Initial Decision when a party has failed to advise the Department Administrative Appeals Unit of a change of address or a correct address; or any other circumstance which was foreseeable or preventable.
- K. "Governing body" means the individual, partnership, corporation, or association in which the ultimate authority and legal responsibility is vested for the administration and operation of a child care facility.
- L. "Initial Decision" means the written decision rendered by the Administrative Law Judge pursuant to sections 24-4-105 and 26.5-1-107, C.R.S.
- M. "Licensee" means the entity or individual to which a license is issued and that has the legal capacity to enter into an agreement or contract, assume obligations, incur and pay debts, sue and be sued in its own right, and be held responsible for its actions. A licensee may be a governing body.
- N. "Local Coordinating Organization" (LCO) means the entity selected by the Department pursuant to section 26.5-1-103(4), C.R.S.
- O. "Office of Administrative Courts" (OAC) means the courts created in the Colorado Department of Personnel and Administration by section 24-30-1001(1), C.R.S.
- P. Preponderance of Evidence means credible evidence that a claim is more likely true than not.
- Q. "Recipient" means the same as in section 26.5-4-103(10), C.R.S.
- R. "Timely Request" means a request for modification of a hearing or procedural deadline made no later than one (1) business day prior to the hearing date or deadline.

6.200 GENERAL RULES FOR AN APPEAL, INITIAL DECISIONS, AND FINAL AGENCY DECISIONS

- A. This section applies to state-level appeals of:
 - 1. County department decisions and Department actions concerning CCCAP benefits, including the result of a county dispute resolution conference and a county department's failure to act concerning benefits;

2. Department actions concerning child care licenses, including Department determinations to deny, suspend, or revoke a permanent license or to make a permanent license probationary; and
3. Department determinations concerning LCO applications and agreements, including application denials and termination of coordinating agreements.

6.201 CONDUCT AND PROCEDURE OF HEARINGS

- A. The conduct and procedure of all hearings described in these rules are governed by the Office of Administrative Court's Procedural Rules found at 1 CCR 104-1 (Sept. 30, 2014), herein incorporated by reference, unless specified otherwise in these rules. No later editions or amendments are incorporated. These rules are available at no cost from the Department of Personnel and Administration, 1525 Sherman St., Denver, Colorado 80203 or at <https://www.sos.state.co.us/CCR/GenerateRulePdf.do?ruleVersionId=5911&fileName=1%20CCR%20104-1>. These rules are also available for public inspection and copying at the Colorado Department of Early Childhood, 710 S. Ash St., Bldg. C, Denver, Colorado 80246.
- B. When the Administrative Law Judge (ALJ) dismisses an appeal, the decision of the ALJ shall be an Initial Decision, which shall not be implemented pending review by the Department Administrative Appeals Unit and entry of a Final Agency Decision pursuant to section 26.5-1-107, C.R.S.

6.202 DECISION AND NOTIFICATION

A. INITIAL DECISION

1. Following the conclusion of the hearing, the Administrative Law Judge (ALJ) shall prepare and issue an Initial Decision within sixty (60) days, or as soon as possible. Once the ALJ issues the Initial Decision, the Office of Administrative Courts shall immediately deliver the Initial Decision to the Department Administrative Appeals Unit for determination of the Final Agency Decision.
2. The Initial Decision is an initial determination on whether the county department, Department, or its agents acted in accordance with, and/or properly applied, the applicable statutes and administrative rules of the Department. The ALJ has no jurisdiction or authority to determine issues of constitutionality or legality of the Department's administrative rules.
3. The Initial Decision must advise the parties that failure to file exceptions to provisions of the Initial Decision will waive the right to seek judicial review of a Final Agency Decision which affirms those provisions.
4. The Department Administrative Appeals Unit shall serve the Initial Decision upon each party by first class mail or by electronic mail, if the parties agree to electronic service within ten (10) calendar days of receiving the Initial Decision. This is the Notice of Initial Decision. The Department Administrative Appeals Unit shall transmit a copy of the Initial Decision to the division within the Department that administers the program(s) pertinent to the appeal.
5. The Initial Decision shall not be implemented pending review by the Department Administrative Appeals Unit and entry of a Final Agency Decision.

B. REVIEW BY THE DEPARTMENT ADMINISTRATIVE APPEALS UNIT

The Department Administrative Appeals Unit is the designee of the Executive Director, and shall review the Initial Decision of the Administrative Law Judge (ALJ) and enter a Final Agency Decision affirming, modifying, reversing, or remanding the Initial Decision.

1. Procedure

- a. Any party seeking a Final Agency Decision which reverses, modifies, or remands the Initial Decision of the ALJ must file Exceptions to the Initial Decision with the Department Administrative Appeals Unit, within fifteen (15) days (plus three days for mailing) from the date the Initial Decision was mailed to the parties. Exceptions must state specific grounds for reversal, modification, or remand of the Initial Decision. The Department Administrative Appeals Unit cannot consider any arguments other than the issues raised in the appeal before the ALJ. The Department Administrative Appeals Unit cannot consider new evidence, which with reasonable diligence could have been produced at the time of the hearing or review.
- b. If the Exceptions do not challenge the findings of fact, but instead assert only that the ALJ improperly interpreted or applied state administrative rules or statutes, the party filing Exceptions is not required to provide a transcript or recording to the Department Administrative Appeals Unit.
- c. The Department Administrative Appeals Unit cannot consider any challenge to the facts unless a transcript and/or audio recording in lieu of a hearing transcript is provided.
- d. The Department Administrative Appeals Unit shall serve a copy of the Exceptions on each party by first class mail or by electronic mail, if the parties agree to electronic service. Each party has ten (10) calendar days from the date Exceptions were mailed to the parties to file a written response to the Exceptions. The Department Administrative Appeals Unit shall not permit oral argument.
- e. While review of the Initial Decision is pending before the Department Administrative Appeals Unit, the record on review, including any transcript or recording of testimony filed with the Department Administrative Appeals Unit, shall be available for examination by any party at the Department Administrative Appeals Unit during regular business hours.
- f. For appeals of decisions related to CCCAP, the division(s) within the Department responsible for administering CCCAP may file Exceptions to the Initial Decision, or respond to Exceptions filed by a party, even though the division has not previously appeared as a party to the appeal. The division's exceptions or responses must be filed in compliance with the requirements of this rule section 6.202(B). Exceptions filed by the division that did not appear as a party at the hearing, shall be treated as requesting review of the Initial Decision upon the Department's own motion.
- g. In the absence of Exceptions filed by any party or by a division within the Department, the Department Administrative Appeals Unit shall review the Initial Decision, the Office of Administrative Court's hearing file, and if applicable, the recorded testimony of witnesses, before entering a Final Agency Decision.
- h. Review by the Department Administrative Appeals Unit will determine whether the Initial Decision properly interpreted and applied administrative rules of the

Department, or relevant statutes, and whether the findings of fact and conclusions of law support the decision.

- i. The Department Administrative Appeals Unit shall serve copies of the Final Agency Decision to all parties by first class mail or by electronic mail, if the parties agree to electronic service.
- j. The effective date of the Final Agency Decision shall be the third (3rd) day after the date the Final Agency Decision is mailed to the parties, even if the third (3rd) day falls on Saturday, Sunday, or a legal holiday. The Department Administrative Appeals Unit must advise the parties of the effective date of the Final Agency Decision.
- k. The Department or county department shall initiate action to comply with the Final Agency Decision within three (3) business days after the effective date of the Final Agency Decision. The Department shall comply with the Final Agency Decision even if reconsideration is requested, unless the effective date of the Final Agency Decision is postponed by order of the Department Administrative Appeals Unit or a reviewing court.
- l. The Final Agency Decision must notify the parties of their right to seek judicial review pursuant to section 24-4-106, C.R.S.

2. Transcripts

- a. The party filing Exceptions challenging the ALJ's findings of fact is responsible for obtaining a transcript unless they file for permission to file an audio recording (see rule subsection 3, below).
- b. To obtain a transcript, a party must:
 - 1) request the audio recording of the hearing from the Office of Administrative Courts;
 - 2) pay for a transcriptionist of their choosing to transcribe the audio recording into a transcript; and
 - 3) file the transcript by the due date for filing Exceptions.
- c. Transcripts must be filed with a party's Exceptions. A party may request additional time for filing Exceptions in order to obtain the transcript. Any transcript received by the Department Administrative Appeals Unit after the due date for filing Exceptions stated in the Notice of Initial Decision or the deadline imposed by the Department Administrative Appeals Unit if a request for extension of time was granted, will not be considered.

3. Audio Recording

- a. If a party cannot afford a transcript, the party may request permission to file an audio recording. The request must be filed in writing with the Department Administrative Appeals Unit prior to the due date for filing Exceptions, and include:
 - 1) An explanation as to why they cannot afford a transcript; and

- 2) Why it is essential for the Department Administrative Appeals Unit to listen to testimony of a specific witness or witnesses.
- b. A County Department's request to submit an audio recording instead of a transcript must state that funds are not available in the county department's operating budget to pay for preparation of a transcript and the request must be certified by the county department director.
- c. Any submission of an audio recording without first obtaining permission from the Department Administrative Appeals Unit will not be considered.
- d. The requesting party is solely responsible for requesting the copy of the audio recording from the Office of Administrative Courts and for filing the audio recording with the Department Administrative Appeals Unit by the due date provided in the Notice of Initial Decision unless an extension of time has been granted by the Department Administrative Appeals Unit.

6.203 RECONSIDERATION OF FINAL AGENCY DECISION

- A. A motion for reconsideration of a Final Agency Decision may be granted by the Department Administrative Appeals Unit only for the following reasons:
 1. A showing of good cause for failure to file Exceptions to the Initial Decision within the fifteen (15) (plus three days for mailing) day period allowed by rule section 6.202(B)(1)(a); or
 2. Upon a showing that the Final Agency Decision is based upon a clear or plain error of fact or law. An error of law means failure by the Department Administrative Appeals Unit to follow a rule, statute, or court decision which controls the outcome of the appeal.
 3. No motion for reconsideration shall be granted unless it is filed in writing with the Department Administrative Appeals Unit within fifteen (15) days of the date that the Final Agency Decision is mailed to the parties. The motion must state specific grounds for reconsideration of the Final Agency Decision.
 4. The Department Administrative Appeals Unit shall serve a copy of the motion for reconsideration to each party of record and appropriate division of the Department via first class mail or by electronic mail, if the parties agree to electronic service.
- B. For the Colorado Child Care Assistance Program (CCCAP) appeals, when an appeal results in a Final Agency Decision that the county department or Department was not in accordance with administrative rules of the Department, or when the county department or Department so determines after a request for a hearing is made, the CCCAP adjustment or corrective payment is made retroactively to the date of the incorrect action.

6.300 COLORADO CHILD CARE ASSISTANCE PROGRAM (CCCAP COUNTY DEPARTMENT DISPUTE RESOLUTION PROCESS AND APPEALS

To resolve disputes between county departments or the service delivery agency and CCCAP applicants or recipients, county departments shall adopt procedures for the resolution of disputes consistent with this section. The procedures shall be designed to establish a simple non-adversarial format for the informal resolution of CCCAP disputes.

6.301 OPPORTUNITY FOR CONFERENCE

- A. Before the county department or local service delivery agency takes a negative action such as denies, terminates, recovers, or modifies a CCCAP benefit, it shall provide an opportunity for a county dispute resolution conference in writing and in accordance with the "Timely Written Noticing" requirement outlined in 8 CCR 1403-1 rule section 3.103(CCCCC).
- B. The county department or local service delivery agency must provide the applicant/recipient with notice of the applicant/recipient's right to the county dispute resolution conference. The notice must provide that:
 - 1. The applicant/recipient must request a county dispute resolution conference prior to the effective date of the suspension, termination, or modification of the CCCAP benefit as provided on the written notice;
 - 2. Failure of the applicant/recipient to request a county dispute resolution conference prior to the effective date provided on the written notice, or failure to appear at the time of the scheduled conference without making a timely request for postponement, constitutes abandonment of the right to a conference, unless the applicant/recipient can show good cause for failure to appear.
 - 3. The applicant/recipient may bypass the county dispute resolution process and appeal directly to the state Office of Administrative Courts, pursuant to section 24-4-105(2), C.R.S., and as described below in rule section 6.304.
- C. If the applicant/recipient requests a county dispute resolution conference prior to the effective date of the suspension, termination, or modification of the CCCAP benefit as provided on the written notice, the county department or local service delivery agency must provide notice to the applicant/recipient of the scheduled date, time and location or log-in information for the conference. Notice should be in writing; however, verbal notice may also be given in addition to the written notice to facilitate the dispute resolution process.

6.302 CONDUCT OF COUNTY DISPUTE RESOLUTION CONFERENCE

- A. Upon request, the county department or local service delivery agency must provide or allow access to the contents of the case file and all documents and records used by the county department or local service delivery agency in making its decision with the exception of names of confidential informants; privileged communications between the county department and its attorney; and the nature and status of pending criminal prosecutions. The county department must provide these documents or records within thirty (30) days of the request.
- B. The county dispute resolution conference must be held in the county department and would include the local service delivery agency where the proposed decision is pending, before a person who was not directly involved in the initial determination of the action in question. The county may conduct the county dispute resolution conference virtually if the technology is available to both the county and the applicant/recipient. The individual who initiated the action in dispute shall not conduct the county dispute resolution conference.
- C. The individual designated to conduct the conference must have knowledge, experience, and training, to determine if the proposed action is valid.
- D. Two (2) or more county departments may establish a joint dispute resolution process. If two (2) or more counties establish a joint process, the location of the conference need not be held in the county department taking the action, but the conference location must be easily accessible to the applicant/recipient.

- E. The county dispute resolution level conference may be conducted by telephone, or virtually, if the applicant/recipient agrees to a telephonic or virtual conference.
- F. The individual who initiated the action in dispute, or another person familiar with the case, shall attend the county dispute resolution conference and present the factual basis for the disputed action.
- G. The applicant/recipient may represent themselves or may be represented by legal counsel, a relative, friend, or other spokesman. Representation by a nonlawyer in this circumstance does not constitute the practice of law.
- H. The county dispute resolution conference must be conducted on an informal basis. The county department must make every effort to ensure that the applicant/recipient understands the county department's specific reasons for the disputed action. If the applicant/recipient requests an interpreter, the county department shall provide an interpreter for the county dispute resolution conference.
- I. The county department shall have all documents and records in the case file described in rule section 6.302(A) available at the conference.
- J. The applicant/recipient must be allowed to present information or documentation to support their position.
- K. To the extent possible, the county dispute resolution conference must be scheduled and conducted prior to the effective date of the suspension, termination, or modification of the CCCAP benefit as provided on the written notice. If the county department cannot conduct the county dispute resolution conference prior to suspension, termination, or modification of the CCCAP benefit, benefits must be continued until such conference can be held, unless the individual waives continued benefits.
- L. The county department may consolidate disputes with any other public assistance program if the facts are similar and consolidation will facilitate resolution of all disputes.
- M. Failure to appear at the time of the scheduled county dispute resolution conference without making a timely request for postponement constitutes abandonment of the right to a county dispute resolution conference unless the applicant/recipient can show good cause for their failure to appear.

6.303 COUNTY DEPARTMENT DISPUTE RESOLUTION CONFERENCE DECISION

- A. If the dispute is not resolved through the county dispute resolution conference, the person conducting the county dispute resolution conference shall prepare a written statement indicating that the dispute was not resolved. The statement must be issued within ten (10) calendar days of the county dispute resolution conference and include an explanation of the applicant/recipient's right to request an appeal before an Administrative Law Judge; the time limit for requesting an appeal; and if appropriate, a statement that applicable benefits will continue pending a final state decision if appealed to the state within ten (10) calendar days from the date of the statement.
 - 1. To appeal a written statement, the applicant/recipient must submit a written request that is mailed within ten (10) calendar days of the date the county dispute resolution conference decision was mailed to the applicant/recipient in order to receive continued benefits pending state appeal. Continued benefits will be recovered by the county department as a client error pursuant to rule section 3.145 located in 8 CCR 1403-1, if the Final Agency Decision confirms that the applicant/recipient was not eligible.

- B. If the parties reach an agreement at the county dispute resolution conference, the person who conducted the county dispute resolution conference shall reduce the agreement to writing. The parties or their representatives shall sign the agreement. The agreement will be binding upon the parties. The county department must immediately provide the applicant/recipient with a copy of the written decision. If the conference is held by telephone or through virtual means, the agreement need only be signed by the person who conducted the county dispute resolution conference. The county department must mail or deliver the agreement to the other party(s) within one (1) business day after the county dispute resolution conference.

6.304 COLORADO CHILD CARE ASSISTANCE PROGRAM (CCCAP) APPEAL

- A. The applicant/recipient is entitled to an appeal at the Office of Administrative Courts for the following circumstances:
1. The applicant/recipient's CCCAP application or reapplication has been denied.
 2. The applicant/recipient's CCCAP application has not been acted upon within fifteen (15) calendar days.
 3. The CCCAP benefit has been modified or discontinued, the requested reconsideration of a CCCAP benefit amount deemed incorrect has been refused or delayed through the withholding of authorization, the county department is demanding repayment for any part of an award from a recipient or former recipient which the recipient does not believe is justified, the applicant/recipient disagrees with the type or level of benefits or services provided, or the parent fee calculation.
- B. The county department has the burden of proof, by a preponderance of the evidence, to establish the basis of the decision being appealed. Every party to the proceeding has the right to present their case or defense through testimony and evidence, to submit rebuttal evidence, and to conduct such cross-examination as may be required for a full and true disclosure of the facts. Subject to these rights and requirements, where a hearing will be expedited and the interests of the parties will not be subsequently prejudiced thereby, the Administrative Law Judge may receive all or part of the evidence in written form or by oral stipulations.
- C. The hearing is closed to the public; however, any person or persons whom the applicant/recipient wishes to appear on their behalf in accordance with rule section 6.302(G) may be present, and, if requested by the applicant/recipient and in the record, such hearing may be public.
- D. If an appellant fails to appear at a duly scheduled hearing, having been given proper notice in accordance with 1 CCR 104-1, Rule 4, without having given timely advance notice to the Administrative Law Judge of good cause for inability to appear at the hearing at the time, date and place specified in the notice of hearing, then the appeal shall be considered abandoned and an Order to Show Cause shall be entered by the Administrative Law Judge and served upon the parties by the Office of Administrative Courts. The Order to Show Cause shall not be implemented pending review by the Department Administrative Appeals Unit and entry of a Final Agency Decision.
1. The applicant/recipient must be afforded a ten (10) day period from the date the Order to Show Cause was mailed or delivered, during which the applicant/recipient may explain in writing to the Administrative Law Judge the reason for failure to appear.
 - a) If the Administrative Law Judge finds that there was good cause for the applicant/recipient not appearing, the Administrative Law Judge shall reschedule another hearing date.

- b) If the applicant/recipient submits in writing seeking to show good cause and the Administrative Law Judge finds that the stated facts do not constitute good cause, or if the applicant/recipient does not submit a letter seeking to show good cause within the ten (10) day period, the Administrative Law Judge shall enter an Initial Decision dismissing the appeal.
 - 2. The appellant may file exceptions to the Initial Decision pursuant to rule section 6.202(B)(1)(a).
 - 3. After considering the record and any exceptions filed, the Department Administrative Appeals Unit shall issue a Final Agency Decision that confirms or reverses the dismissal, which shall be served upon the parties.
 - a) If the dismissal is confirmed, the county department shall immediately carry out the necessary actions to provide assistance or services in the correct amount, to terminate assistance or services, to recover assistance incorrectly paid, and/or other appropriate actions in accordance with the rules. An applicant/recipient has the right to appeal a Final Agency Decision confirming the dismissal through the judicial review process as outlined in section 24-4-106, C.R.S.
 - b) If the dismissal is reversed, the case shall be remanded back to the Office of Administrative Courts for further proceedings, if necessary.
- E. The Administrative Law Judge shall not enter a default against an applicant/recipient for failure to file a written answer in response to the notice of violation and voluntary waiver of hearing but shall base the Initial Decision upon the evidence introduced at the hearing, assuming the applicant/recipient appears for the hearing.

6.305 COUNTY DEPARTMENT RESPONSIBILITIES FOR A CCCAP APPEAL

- A. When the applicant/recipient has had a county dispute resolution conference and wishes to appeal the county department's decision to the Office of Administrative Courts for a hearing, the county department must follow the below procedures:
 - 1. Assist in providing materials supporting the applicant/recipient's claim if the applicant/recipient so desires;
 - 2. Provide the applicant/recipient with the opportunity to examine materials as described in rule section 6.202(A);
 - 3. Forward a copy of the written notification given to the applicant/recipient of the proposed adverse action and a copy of the county dispute resolution conference decision to the Office of Administrative Courts.
- B. If the applicant/recipient bypasses the county dispute resolution conference and appeals directly to the Office of Administrative Courts, the applicant/recipient or the county department must deliver a written request for a CCCAP appeal no later than ninety (90) calendar days from the date the county department mailed prior notice of the proposed action to the applicant/recipient via postal service, e-mail or other electronic systems, fax, or hand-delivery. After the Office of Administrative Courts receives the appeal request, it will forward a copy of the notice to the applicant/recipient setting a date for the hearing to the county department. Upon receipt by the county department, the county department shall prepare and mail a letter to the applicant/recipient with a copy to the Office of Administrative Courts, no later than five (5) business days prior to the hearing, which provides the following information:

1. The reasons for the county department decision and a specific explanation of each factor involved, such as the amount of excess property or income, assignment or transfer of property, residence factors, and service needs;
 2. The specific state administrative rules and/or the official written county department policy(s) on which the decision is based, and numeric reference to each rule, including the appropriate Code of Colorado Regulations (CCR) citations;
 3. Notice that the county department will assist the applicant/recipient in providing materials supporting the applicant/recipient's claim, if desired; and
 4. Notice that the applicant/recipient has the opportunity to examine regulations and materials described in rule section 6.302(A), to be used at the hearing.
- C. Any clear expression orally or in writing by the applicant/recipient, or someone described in rule section 6.302(G) that the applicant/recipient legally authorized to act on their behalf, that they want an opportunity to have a specific action, as defined by rule section 6.304(A), reviewed by the Department is considered an appeal and a request for a hearing. If the request for an appeal and hearing is made orally, the county department shall immediately prepare a written request for the individual's signature or have the recipient prepare such request, specifying the action taken by the county department on which the request is based and the reason for appealing that action.
- D. To withdraw an appeal, the applicant/recipient must submit a statement in writing to the Office of Administrative Courts.
- E. If the applicant/recipient is represented by legal counsel, a relative, friend, or other spokesperson, the county department must not discuss the merits of the appeal or the question of whether or not to proceed with the appeal outside the presence of, or without the permission of, such legal counsel, relative, friend, or other spokesperson.
- F. If the county department learns that the applicant/recipient will be represented by legal counsel, the county department shall make every effort to ensure that it too is represented by an attorney at the hearing.
- G. If the applicant/recipient has a language difficulty, the county department shall arrange to have present at the hearing a qualified interpreter who will be sworn to translate correctly.
- H. The county department may review the case and consider any new factors which might change the status of the case at any time prior to the hearing, including reversing its decision or otherwise settling the issue. The county department must immediately report any change which eliminates the need for a hearing to the Office of Administrative Courts by telephone or in writing.
- I. The county department shall arrange for a hearing room appropriate to accommodate the number of persons, including witnesses, who are expected to be in attendance, taking into consideration such factors as privacy; whether the hearing is being held virtually absence of distracting noise; need for tables, chairs, electrical outlets, adequate lighting and ventilation, and conference telephone facilities.

6.306 STATE RESPONSIBILITIES FOR A CCCAP APPEAL

- A. The Department is responsible for notifying the Office of Administrative Courts (OAC) of all requests for appeals that the Department receives.

- B. Upon receipt by the Office of Administrative Courts of an appeal request, the Office of Administrative Courts will assign the appeal a case number and cause the appeal to be set for hearing through a setting conference.
- C. At the setting conference, the Office of Administrative Courts will set a hearing date at least thirty (30) days in advance. The Office of Administrative Courts will send a hearing notice by first class mail or electronic mail, depending on the preferences of the applicant/recipient, to the applicant/recipient and the county department notifying them of the date, time, and place of the hearing.
- D. The Office Administrative Courts must inform the applicant/recipient appealing the county decision (appellant) that if the date, time, and/or place of the hearing is not satisfactory, they must notify the Office of Administrative Courts and, if good cause exists, the Office of Administrative Courts will consider changing the date, time, and/or place of the hearing.
- E. The Office of Administrative Courts will provide an information sheet to the appellant with the hearing notice to explain the hearing procedures to the appellant. The information sheet must inform the appellant that:
 - 1. They have the right to seek legal representation.
 - 2. Before and during the hearing, the appellant or the appellant's representative has the right to examine all materials to be used at the hearing. Information which the appellant or the appellant's representative does not have an opportunity to see before or after the hearing shall not be made a part of the hearing record or used in a decision on an appeal. No material made available for review by the Administrative Law Judge may be withheld from review by the appellant or the appellant's representative.
 - 3. Failure to appear at the hearing as scheduled, without having secured a proper extension in advance, or without having shown good cause for failure to appear, shall constitute abandonment of the appeal and cause the appeal to be dismissed. See rule section 6.304(D), above.
- F. Initial Decisions:
 - 1. The Office of Administrative Courts Administrative Law Judge must issue a written Initial Decision of law in every appeal.
 - 2. The Office of Administrative Courts must include copies of all exhibits, pleadings, applications, evidence, exhibits, and other papers used to inform the Initial Decision, with the Initial Decision for the Final Agency Decision.
 - 3. The Administrative Law Judge has twenty (20) days from the date the hearing record closed to issue an Initial Decision.
 - 4. The Initial Decision shall not be implemented pending review by the Department Administrative Appeals Unit and entry of a Final Agency Decision.
- G. The Department's Administrative Appeals Unit must issue a Final Agency Decision in every appeal. All Final Agency Decisions on CCCAP appeals shall be made within ninety (90) days from the date of the request for hearing was received.

6.307 GROUP HEARINGS AND EXCEPTIONS

- A. When more than one (1) individual requests for hearing are received and if the sole issue involved pertains to state or federal law or changes in state or federal law, a single group hearing may be conducted. Each applicant/recipient shall be permitted to present their own case or be represented by legal counsel of their choice, or a relative, friend, or other spokesperson. Each applicant/recipient is entitled to receive a copy of the written decision.
- B. A hearing shall not be granted when either state or federal law requires an automatic benefit adjustment for classes of applicants/recipients unless the sole reason for an individual appeal is incorrect benefit computation. Furthermore, a hearing shall not be granted when either state or federal law requires or results in a reduction or deletion of a benefit.
- C. Unless the applicant/recipient has properly designated an individual to represent them, a provider of assistance, or any other provider of goods and services to applicants/recipients, shall not be granted a hearing concerning an alleged adverse action to an applicant/recipient.

6.400 CHILD CARE LICENSING PROGRAM APPEALS

6.401 NEGATIVE LICENSING ACTION APPEALS

- A. In the case of a petition by the Department or an appeal by a licensee or an applicant for a license, for an issue related to license status, the decision of the Administrative Law Judge is an Initial Decision subject to Department review or modification. The Department will review the Initial Decision and issue a Final Agency Decision. The Final Agency Decision is subject to judicial review, pursuant to sections 24-4-106 and 26.5-1-107, C.R.S.
- B. The licensing appeal process may be initiated by the licensee/applicant, their legal representative, or by the Department. The licensee/applicant need not hire an attorney to appeal the licensing decision unless required by section 13-1-127, C.R.S.

6.402 APPLICATION DENIAL OR DENIAL OF A RENEWAL

- A. The Department can deny an application for a child care license or deny an application for renewal of a child care license for the reasons stated in section 26.5-5-317(2), C.R.S.
- B. When the Department denies a child care licensing application or decides not to renew an existing license, it must notify the applicant or licensee in writing of the decision. The decision letter must be mailed by certified mail to the applicant or licensee at the address listed on the application or renewal form.
- C. An applicant who is denied a license or a licensee whose application for renewal is denied has the right to appeal the agency decision. To appeal the decision, the applicant or licensee must request a hearing in writing by sending a request to the Department within thirty (30) calendar days of receiving the decision letter.
- D. The burden of proof is on the applicant or licensee to show why they are entitled to a license or renewed license.
- E. After receiving a request for hearing, the Department shall initiate a case in the Office of Administrative Courts (OAC) and cause a Notice of Duty to Answer and Notice of Charges (Notice of Charges) to be filed with the Office of Administrative Courts. The Notice of Charges must assert the grounds for denying the applicant's license application or failing to renew a licensee's license. The Department must serve the Notice of Charges on the applicant/licensee (appellant) consistent with the Office of Administrative Court's procedures, as incorporated by reference in rule section 6.201(A).

- F. The appellant must respond to the Notice of Charges within thirty (30) days of service or mailing of the Notice of Charges. If the appellant fails to respond, the Office of Administrative Courts Administrative Law Judge may enter a Default Judgment affirming the Department's decision regarding the application or renewal.
- G. All hearings regarding the denial of a license or decision not to renew an existing license must be conducted in accordance with sections 24-4-104 and 24-4-105, C.R.S., and rule section 6.201(A).
- H. Each party in the action may file exceptions to the Initial Decision in accordance with section 24-4-105(14)(a)(I), C.R.S., and rule section 6.202(B)(1)(a).
- I. The Department's Administrative Appeals Unit must issue a Final Agency Decision in accordance with rule section 6.202(B).
- J. The Final Agency Decision may be further appealed by filing a judicial review action pursuant to section 24-4-106, C.R.S.

6.403 APPEALS FROM SUMMARY SUSPENSION, PROBATIONARY LICENSE, OR LICENSE REVOCATION

- A. The Department can summarily suspend, modify to probationary, or revoke a child care license for the reasons stated in section 26.5-5-317(2), C.R.S.
- B. The Department must follow the requirements of section 24-4-104(4), C.R.S., in issuing orders of summary suspension for child care licenses. The Department must personally serve, in accordance with Colorado Rules of Civil Procedure Rule 4, the Order of Summary Suspension on the licensee.
 - 1. Once the Order of Summary Suspension has been served, the Department will initiate a case at the Office of Administrative Courts for approving the Order of Summary Suspension and/or proceeding with an Order of Revocation, as described in rule section 6.403(E), below.
- C. When the Department makes a decision to revoke or modify a child care license, it must give notice, in writing, of the objective facts or conduct that warrants such action (Data Views and Arguments letter). The Department must send the notice by certified mail or electronic mail to the licensee to the mailing address or email address provided to obtain licensure.
 - 1. The licensee shall have the opportunity to respond to the Data Views and Arguments letter. The licensee's response must be provided in writing, and is due on or before the date listed in the Data Views and Arguments letter, but no earlier than thirty (30) business days from the date provided on the Data Views and Arguments letter.
- D. After the deadline provided on the Data Views and Arguments letter expires for the licensee to respond, the Department shall consider any responses provided, and make a decision regarding whether to proceed with modification or revocation of the child care license within thirty (30) days of receiving the licensee's response, or expiration of the licensee's deadline to submit a response to the Data Views and Arguments letter.
 - 1. If the Department proceeds with modification or revocation, it shall send the notice of that decision to the licensee via certified mail or electronic mail, and initiate an appeal at the Office of Administrative Courts.

2. If the Department decides not to proceed with modification or revocation, it shall send notice of that decision to the licensee via certified mail or electronic mail.
- E. The Department will initiate a case with the Office of Administrative Courts by causing a Notice of Duty to Answer and Notice of Charges (Notice of Charges) to be filed. The Notice of Charges must assert the grounds for suspending, modifying, or revoking the license. The Department must serve the Notice of Charges on the licensee in accordance with the Office of Administrative Courts procedures, incorporated by reference in rule section 6.201(A).
- F. The licensee must respond to the Notice of Charges within thirty (30) days of service or mailing of the Notice of Charges. If the licensee fails to respond, the Office of Administrative Courts Administrative Law Judge may enter a Default Judgment affirming the Department's decision regarding the application or renewal.
- G. The burden of proof is on the Department to show, by a preponderance of the evidence, why the license should be suspended, modified, or revoked.
- H. All hearings regarding suspension, modification, or revocation of a license must be conducted in accordance with sections 24-4-104 and 24-4-105, C.R.S., and rule section 6.201(A).
- I. Each party may file exceptions to the Initial Decision in accordance with section 24-4-105(14)(a)(I), C.R.S., and rule section 6.202(B)(1)(a).
- J. The Department's Administrative Appeals Unit must issue a Final Agency Decision in accordance with rule section 6.202(B).
- K. The Final Agency Decision may be further appealed by filing a judicial review action pursuant to section 24-4-106, C.R.S.

6.500 LOCAL COORDINATING ORGANIZATIONS (LCO) APPEALS

These rules are promulgated pursuant to section 26.5-2-105(5), C.R.S., to establish a process by which an applying entity that is not selected to act as a Local Coordinating Organization (LCO), or a Local Coordinating Organization for which the coordinating agreement is terminated, may appeal the decision of the Department.

- A. LCOs are selected and reviewed by the Department according to sections 26.5-2-103(4) and 26.5-2-105, C.R.S.
- B. When the Department denies an entity's application to be an LCO or terminates an LCO's coordinating agreement, it must provide the LCO with a written explanation that includes:
 1. the reasons for the Department's decision and a specific explanation thereof;
 2. the specific rules, laws, and/or contractual provisions on which the decision is based, and numeric references to each legal authority; and
 3. a notice of the right to appeal the Department's decision to the Office of Administrative Courts (OAC), consistent with this rule section 6.500.
- C. An entity that is not selected as an LCO, or an existing LCO that has had its coordinating agreement terminated is entitled to appeal that decision in an appeal with the OAC.

- D. The entity wishing to appeal the LCO denial or termination (appellant) must submit a written appeal request to the Department no later than thirty (30) calendar days after the date the appellant's application for LCO was denied or the appellant's coordinating agreement was terminated.
- E. The Department will initiate the appeal by filing with the OAC:
 - 1. The appellant's timely appeal request; and
 - 2. The Department's Notice of Charges setting forth the factual basis and legal authority for the denial or termination.
- F. The Department must serve a copy of the Notice of Charges on the appellant by regular first class mail, on the same day in which the Notice of Charges was filed with the OAC.
- G. Upon receipt by the OAC of an LCO appeal request, OAC will assign the appeal a case number, and cause the appeal to be set for hearing through a setting conference.
- H. The OAC and the parties to the appeal will set a hearing date at least thirty-five (35) calendar days from the date of the setting conference. The OAC will serve a notice of hearing to the appellant and the Department notifying them of the date, time, and place of the hearing at least thirty (30) days prior to the hearing.
- I. The appellant shall file a response to the Department's Notice of Charges within thirty (30) calendar days after service of the Notice of Charges, pursuant to section 24-4-105(2)(b), C.R.S.
- J. The parties have the right to present their case or defense through testimony and evidence; to submit rebuttal evidence; and to conduct such cross-examination as may be required for a full and true disclosure of the facts. The hearing will be conducted pursuant to section 24-4-105, C.R.S., and the OAC's procedural rules published at 1 CCR 104-1, and incorporated by reference in rule section 6.201(A).
- K. If an appellant fails to appear at a duly scheduled hearing, having been given proper notice, without having given timely advance notice to the Administrative Law Judge of good cause for inability to appear at the hearing at the time, date, and place specified in the notice of hearing, then the appeal shall be considered abandoned and an Order to Show Cause shall be entered by the Administrative Law Judge and served upon the parties by the OAC. The Order to Show Cause shall not be implemented pending review by the Department Administrative Appeals Unit and entry of a Final Agency Decision.
 - 1. The applicant/recipient must be afforded a ten (10) day period from the date the Order to Show Cause was mailed or delivered, during which the applicant/recipient may explain in a writing to the Administrative Law Judge the reason for failure to appear. If the Administrative Law Judge finds that there was good cause for the applicant/recipient not appearing, the Administrative Law Judge shall reschedule another hearing date.
 - 2. If the applicant/recipient submits a writing seeking to show good cause and the Administrative Law Judge finds that the stated facts do not constitute good cause, or if the applicant/recipient does not submit a letter seeking to show good cause within the ten (10) day period, the Administrative Law Judge shall enter an Initial Decision Dismissing Appeal. L. After considering all evidence presented at the hearing, the OAC must issue an Initial Decision as outlined in rule section 6.202(A), within sixty (60) days. The Department's Administrative Appeals Unit will review the Initial Decision pursuant to rule section 6.202(B). The Department's Final Agency Decision is subject to judicial review pursuant to section 24-4-106, C.R.S.

Editor's Notes

New rules 6.100-6.400 were historically located in 9 CCR 2503-8.



COLORADO
Department of Early Childhood

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Program/Division: Administrative Appeals Unit

CDEC Tracking No.: 2023-08-015

CCR Number(s): 8 CCR 1406-1

SOS Tracking No.: TBD

RULEMAKING PACKET

Reason and Justification of the proposed rule or amendment(s):

Compliance with Federal and/or State laws, mandates, or guidelines ▾

If there are "Multiple/Other" reasons, please explain:

Provide a description of the proposed rule or amendment(s) that is clearly and simply stated, and what CDEC intends to accomplish:

The purpose of these new and revised rules are to transfer existing rules from the Colorado Department of Human Services (CDHS) to the Colorado Department of Early Childhood (CDEC); establish an appeals process for Local Coordinating Organizations (LCO); and update rule numbering, statutory references, and provide a general cleanup of the rule language for clarity. These rules were adopted on an emergency basis to ensure CDEC had effective administrative appeals rules before the inter-agency agreement with CDHS terminates on December 30, 2023.

Statutory Authority: (Include Federal Authority, if applicable)

Sections 26.5-1-105(1)(a), 26.5-2-105(5), 26.5-4-108(1)(a), 26.5-4-111, 26.5-5-314, and 24-4-103(6)(a), C.R.S.

Does the proposed rule or amendment(s) impact other State Agencies or Tribal Communities?

☐ Yes

☒ No

If Yes, identify the State Agency and/or Tribal Community and describe collaboration efforts:

Does the proposed rule or amendment(s) have impacts or create mandates on counties or other governmental entities? (e.g., budgetary requirements or administrative burdens)

☒ Yes

☐ No

If Yes, provide description:

These rules have direct impacts to County departments' operations and are "new" to the Colorado Department of Early Childhood, however, these are existing requirements transferred from the Colorado Department of Human Services.

Effective Date(s) of proposed rule or amendment(s):
(E)mergency/(P)ermanent

☒ Mandatory

☐ Discretionary

(E) Effective Date: 12/30/23

(P) Effective Date: 3/16/24

	(E) Termination Date: 4/27/23										
Is the proposed rule or amendment(s) included on the Regulatory Agenda?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, please explain:										
Does the proposed rule or amendment(s) conflict, or are there inconsistencies with other provisions of law?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, please explain:										
Does the proposed rule or amendment(s) create duplication or overlapping of other rules or regulations?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, explain why:										
Does the proposed rule or amendment(s) include material that is incorporated by reference ¹ ?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, provide source:										
Does the proposed rule or amendment(s) align with the department's rulemaking objectives? Choose all that apply.	<table border="1"> <tr> <td><input type="checkbox"/></td><td>Reduce the administrative burden on families and providers accessing, implementing, or providing programs and/or services.</td></tr> <tr> <td><input type="checkbox"/></td><td>Decrease duplication and conflicts with implementing programs and providing services.</td></tr> <tr> <td><input type="checkbox"/></td><td>Increase equity in access and outcomes to programs and services for children and families.</td></tr> <tr> <td><input checked="" type="checkbox"/></td><td>Increase administrative efficiencies among programs and services provided by the department.</td></tr> <tr> <td><input checked="" type="checkbox"/></td><td>Ensure that rules are coordinated across programs and services so that programs are implemented and services are provided with improved ease of access, quality of family/provider experience, and ease of implementation by state, local, and tribal agencies.</td></tr> </table>	<input type="checkbox"/>	Reduce the administrative burden on families and providers accessing, implementing, or providing programs and/or services.	<input type="checkbox"/>	Decrease duplication and conflicts with implementing programs and providing services.	<input type="checkbox"/>	Increase equity in access and outcomes to programs and services for children and families.	<input checked="" type="checkbox"/>	Increase administrative efficiencies among programs and services provided by the department.	<input checked="" type="checkbox"/>	Ensure that rules are coordinated across programs and services so that programs are implemented and services are provided with improved ease of access, quality of family/provider experience, and ease of implementation by state, local, and tribal agencies.
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¹ Incorporation by Reference is all or any part of a code, standard, guideline, or rule that has been adopted by an agency of the United States, this state, or another state, or adopted or published by a nationally recognized organization or association, pursuant to section 24-4-103(12.5), C.R.S.

Rulemaking Proceedings

Type of Rulemaking: Emergency or Permanent ² [Permanent Tier I or Tier II]	<div>Emergency and Permanent ▾</div> <div>N/A (Emergency and Permanent) ▾</div>
Stakeholder Engagement:	List of activities and dates:
Public Folder: Proposed rule, webinar recordings/transcripts, written stakeholder comments, material from small/large focus groups, written petitions/requests, surveys, data, research, reports, published papers, and documents used to develop the proposed rule or amendment(s).	<p>Email and post draft rules on the CDEC Public Notices webpage, to solicit stakeholder feedback: 10/17/23 - 10/25/23</p> <p>Public folder containing all rulemaking material: https://drive.google.com/drive/folders/10AvH6BZoEouBxImdHcywPGJpBWCzzNdK </p>
Assistant Attorney General Review:	10/31/23 - 11/29/23
RAC County Subcommittee Review Date (if required):	<p>12/7/23 (Emergency Rule)</p> <p>1/4/24 (Permanent Rule)</p>
Rules Advisory Council (RAC) Review Date:	<p>12/14/23 (Emergency Rule)</p> <p>1/11/24 (Permanent Rule)</p>
Public Rulemaking Hearing Date(s): [Discussion/Adoption]	<p>12/29/23 (Emergency Adoption)</p> <p>1/25/24 (Permanent Adoption)</p>

² Tier I is used for proposed rule or amendment(s) that have substantive changes, require substantial stakeholder engagement, and will be considered at two Public Rulemaking Hearings (PRH). The first PRH is held for discussion, and the second PRH is held to consider adoption. Tier II is used for proposed rule or amendment(s) that include technical changes, do not require substantial stakeholder engagement, and will be considered at only one Public Rulemaking Hearing (PRH) for adoption.

Regulatory and Cost Benefit Analysis

1. **Community Impact:** Provide a description of the stakeholders that will be affected by the proposed rule or amendment(s), and identify which stakeholders will bear the costs, and those who will benefit. How will the proposed rule or amendment(s) impact particular populations, such as those experiencing poverty, immigrant/refugee communities, non-English speakers, and rural communities?

The consolidation of the appeals rules related to Colorado Child Care Assistance Program (CCCAP), Child Care Licensing, and Universal Preschool Colorado allow participants to easily access rules that apply to them in one location. This ensures ease of access as well as clarity, ultimately leading to more informed stakeholders.

The CCCAP appeals rules reflect current practices. Any revisions made to the existing rules were done so to clarify the current processes, creating a positive impact on families and counties.

The Local Coordinating Organization (LCO) appeals rules will bring administrative ease and a new system to allow potential and current early childhood entities to better position themselves as potential candidates for being selected as an LCO.

Additionally, having all of CDEC's appeals-related rules in one place will make stakeholder's lives more simply by having not just all of the different programs in one place, but by having unified rule sections that cut across multiple programs and service areas with uniformity.

2. **Quality and Quantity:** Provide a description of the probable quantitative and qualitative impact on persons affected by the proposed rule or amendment(s), and comparison of the probable costs and benefits of implementation versus inaction. What are the short- and long-term consequences of the proposed rule or amendment(s).

Any revisions made to the existing CCCAP appeals rules were done so to clarify the current processes, creating a short term positive impact on counties as there are no new rules to implement.

Currently, the LCO appeals process is not in rule. Failure to enact these rules will result in confusion for the field and an abandonment of a statutory requirement.

This holds true similarly as well, for the general appeals provisions. CDEC is a brand new agency and needs to enact these rules to (i) conform to statute; (ii) give clarity on process to the field; and (iii) create avenues of recourse for stakeholders who feel unfairly aggrieved.

While these rules will result in some amount of administrative burden, this is because in those instances, the systems literally didn't exist, and this is the initial enactment thereof. Meanwhile, these rules and appeals ecosystem have been structured conscious of how many different programs and services local county departments and CDEC are responsible for and how those programs and services cut across multiple different populations concurrently.

3. **Potential Economic Benefits/Disadvantages:** What are the anticipated economic benefits of the proposed rule or amendment(s), such as: economic growth, creation of new jobs, and/or increased economic competitiveness? Are there any adverse effects on the economy, consumers, private markets, small businesses, job creation, and economic competitiveness?

These appeals rules aren't particularly economic-focused, however, they certainly will have positive ancillary benefits that are economic-related to individuals involved in the appeals system. These rules lay out what the process is for different programs, who is responsible for what, what timelines have to be adhered to, and which governmental entity owns which parts of the process. This

explicitness and departmental-wide approach will make planning, scheduling, and navigating the appeals process easier for individuals.

4. **Fiscal Impacts:** What are the anticipated direct and indirect costs for the state/department to implement, administer, and enforce the proposed rule or amendment(s)? What are the direct and indirect costs to each of the following entities to comply with the proposed rule or amendment(s)? For each, describe the impact or indicate “not applicable.”

Department	<p>As CDEC will be taking on administrative appeals for the first time as a new agency beginning in approximately January, the staff and resources required to properly serve notice and documentation, to complete the Final Decisions, and to perform other state-level responsibilities entailed in these rules, is all new.</p> <p>While some of the appeals processes contained in this rule has previously been performed by OEC prior to the establishment of CDEC as a department, this does not account for the centralized functioning of an Administrative Appeals Unit, which is brand new for CDEC and will be taking on both old OEC responsibilities currently housed under CDHS’s Office of Appeals, and new responsibilities caused by increased programming and services.</p>
Local Governments/ Counties	Not applicable - These are existing rules and regulations. There are no additional costs for local governments/counties associated with transferring these rules to the new Department (CDEC).
Providers	Not applicable - These are existing rules and regulations. There are no additional costs for providers associated with transferring these rules to the new Department (CDEC).
Community Partners (e.g., School Districts, Early Childhood Councils, etc.)	There are no direct or indirect costs for community partners to implement these rules.
Other State Agencies	No impact of other state agencies.
Tribal Communities	No impact on Tribal Communities.

5. **Evaluation:** How will implementation of the proposed rule or amendment(s) be monitored and evaluated? Please include information about measures and indicators that CDEC will utilize, including information on specific populations (identified above).

Rules surrounding administrative appeals must conform to strict statutory requirements and court rules and procedures. OAC is consulted as part of the process. Furthermore, CDEC will have an Administrative Appeals Unit that is responsible for monitoring compliance with the rules. CDEC will then have its work and oversight checked by the judicial system as a co-equal branch of government.

Rather than looking at a metric which attempts to measure programmatic success, we can simply look at the requirements contained within the rules and the laws which they originated from, and see if CDEC is following said rules and requirements precisely. This is an area which does not allow for failure, since it would result in the curtailing of an individual or entity's rights when engaged in appealing a decision/action of CDEC.

6. Comparative Analysis: Provide at least two alternatives to the proposed rule or amendment(s) that can be identified, including the costs and benefits of pursuing each of the alternatives.

These rules must be promulgated for the reasons previously identified regarding statutory compliance and practical reality for the stakeholders involved. Thus, this would be looking at ways we could draft the rules differently.

However, even here, we are guided by court procedures, administrative rights of individuals, and statutory requirements. But, where discretion exists, these rules are designed in a manner to allow individuals access to resources which will help them in their appeal, and thus lead to more expeditious and judicious outcomes. The benefit here is fairness and equity, at the slight expense of further work and burden on the governmental entities involved.

7. Comparative Analysis: Are there less costly or less intrusive methods for achieving the purpose of the proposed rule or amendment(s)? Explain why those options were rejected.

There are no other conceivable methods that were identified to conduct administrative appeals in a fair and just manner.

PHIL WEISER
Attorney General
NATALIE HANLON LEH
Chief Deputy Attorney General
SHANNON STEVENSON
Solicitor General

TANJA WHEELER
Associate Chief Deputy Attorney
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Office of the Attorney General

Tracking number: 2023-00819

Opinion of the Attorney General rendered in connection with the rules adopted by the
Administrative Appeals for the Colorado Department of Early Childhood

on 12/18/2023

8 CCR 1406-1

ADMINISTRATIVE APPEALS RULES AND REGULATIONS

The above-referenced rules were submitted to this office on 12/20/2023 as required by section 24-4-103, C.R.S. This office has reviewed them and finds no apparent constitutional or legal deficiency in their form or substance.

January 04, 2024 09:41:51

A blue ink signature of Philip J. Weiser, written in a cursive style.

Philip J. Weiser
Attorney General
by Kurtis Morrison
Deputy Attorney General

Nonrulemaking Public Notices and other Miscellaneous Rulemaking Notices

Filed on 01/24/2024

Department

Department of Health Care Policy and Financing

Agency

Medical Services Board (Volume 8; Medical Assistance, Children's Health Plan)



COLORADO

Department of Health Care
Policy & Financing

Notice of Public Comment Process Medicaid Section 1115 Demonstration Amendment

Public Comment Period Begins: January 25, 2024, at 8:00 a.m. MST

Public Comment Period Ends: February 24, 2024, at 5:00 p.m. MST

Public notice is hereby given that the State of Colorado's Department of Health Care Policy & Financing (HCPF) is seeking public comments on an amendment to the Expanding the Substance Use Disorder (SUD) Continuum of Care Section 1115 Demonstration (Demonstration).

Proposed Amendment Summary

Colorado is requesting an amendment to the Demonstration to authorize:

1. Pre-release services for individuals transitioning from state-run correctional facilities;
2. Reimbursement for acute inpatient and residential stays in institutions for mental disease (IMD) for individuals diagnosed with a serious mental illness (SMI) or serious emotional disturbance (SED); and
3. Continuous eligibility for children ages 0-3 and adults leaving a Colorado Department of Corrections (DOC) facility.

HCPF is requesting to have an effective date of January 1, 2025 for the proposed amendment to provide the necessary time to implement and operationalize the services and eligibility components within the amendment.

Pre-Release Services

The State intends to implement the Demonstration statewide on or after July 1, 2025. The State requests to operate the Demonstration through the end of the current SUD Demonstration approval period, which is December 31, 2025. This amendment request provides a detailed overview of coverage and service provisions, as well as Reentry initiative objectives, financing, implementation, and monitoring/evaluation.

In alignment with Senate Bill 22-196, this amendment request would authorize Medicaid-funded reentry services to incarcerated individuals across several settings, including state prisons and youth in correctional facilities. The 90-day reentry services would include:

- Case management (care coordination) services that include physical and behavioral health clinical screenings and consultation services;
- A 30-day supply of prescription medications and medication administration upon release; and
- Medication assisted treatment (MAT) for all FDA-approved medications (including counseling and long acting injectables).

IMD

The State intends to implement the Demonstration statewide on or after July 1, 2025. The State requests to operate the Demonstration through the end of the current SUD Demonstration approval period, which is December 31, 2025. This amendment request provides a detailed overview of coverage and service provisions, as well as SMI/SED initiative objectives, financing, implementation, and monitoring/evaluation.

Currently, Colorado utilizes “in lieu of” authority under its managed care 1915(b) Waiver to pay for care in an IMD. This allows managed care entities (MCE) to provide IMD reimbursement for stays of up to 15 days in a calendar month. This authority provides sufficient coverage for most acute psychiatric inpatient stays. However, there remain IMD stays that exceed the 15-day limit due to issues such as patient acuity and additional time needed to ensure a safe and appropriate transition to community-based services.

Through this amendment, HCPF seeks authority to reimburse the first 15-days of stays that exceed the current limit under the “in lieu of service” authority. This will permit Colorado to modify its current practice through which a prorated capitation payment is made to the MCE for the days within the month that the enrollee was not in an IMD and the MCE’s subsequent payment recoupment from the IMD for the entire stay. Under the amendment, HCPF proposes to eliminate the capitation recoupment process, account for IMD stays of up to 15 days in the capitation rate setting process and require MCEs to reimburse IMDs for the first 15 days of a stay.

Continuous Eligibility

HCPF is seeking to implement the continuous eligibility component of this amendment by January 1, 2026. Colorado House Bill 23-1300 (HB23-1300) authorizes HCPF to seek federal authority to provide continuous Medicaid and Child Health Plan Plus (CHP+) coverage for children up to age three and for twelve months for adults who have been released from a Colorado DOC facility, regardless of any change in income during that time. Through this Demonstration amendment, Colorado aims to improve the health and well-being of enrollees through consistent access to health care coverage during critical periods in life. Providing continuous coverage can decrease gaps in insurance coverage, and enhance the continuity of care and delivery of physical and behavioral health services during early childhood and when adults experience the difficult transition of leaving the criminal justice system.

Amendment Objectives and Goals

Pre-Release Services

This Demonstration amendment will allow for the continuity of medical assistance services for individuals leaving the DOC and DYS facilities. Consistent with the CMS goals as outlined in the April 17, 2023, State Medicaid Director (SMD) letter, the State’s specific goals for the Re-entry Initiative are to:



1. **Increase coverage, continuity of coverage, and appropriate service uptake** through assessment of eligibility and availability of coverage for benefits in carceral settings just prior to release;
2. **Improve access to services** prior to release and improve transitions and continuity of care into the community upon release and during re-entry;
3. **Improve coordination and communication** between correctional systems, Medicaid systems, administrative services organizations, and community-based providers;
4. **Increase additional investments in health care and related services**, aimed at improving the quality of care for beneficiaries in carceral settings and in the community to maximize successful re-entry post-release;
5. **Improve connections between carceral settings and community services** upon release to address physical health, behavioral health (BH), and health related social needs (HRSN);
6. **Reduce all-cause deaths** in the near-term post release; and
7. **Reduce the number of emergency department (ED) visits and inpatient hospitalizations** among recently incarcerated Medicaid beneficiaries through increased receipt of preventive and routine physical and BH care.

IMD

The State's goals for reimbursement of short term stays in IMDs are aligned with those of CMS for this Demonstration opportunity, including:

- Reduced utilization and lengths of stay in EDs among Medicaid beneficiaries with SMI or SED while awaiting mental health treatment in specialized settings;
- Reduced preventable readmissions to acute care hospitals and residential settings;
- Improved availability of crisis stabilization services including services made available through call centers and mobile crisis units, intensive outpatient services, as well as services provided during acute short-term stays in residential crisis stabilization programs, psychiatric hospitals, and residential treatment settings throughout the state;
- Improved access to community-based services to address the chronic mental health care needs of beneficiaries with SMI or SED including through increased integration of primary and behavioral health care; and
- Improved care coordination, especially continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities.

Continuous Eligibility



This Demonstration amendment will end churn among Medicaid and CHP+ enrolled children through age three, enabling families and providers to better address their primary and preventive health care needs. This request seeks to:

- Ensure continuous Medicaid and CHP+ coverage for young children;
- Promote longer-term access to and continuity of physical health care, behavioral health care, dental care, and preventive services;
- Combat racial inequities; and
- Improve health outcomes and well-being for low-income young children.

This request will also ensure that coverage disruptions do not prevent adults leaving incarceration in Colorado DOC facilities from receiving ongoing treatment for physical or behavioral health needs during a critical time. This is anticipated to improve SUD and mental health treatment, reduce recidivism rates, and reduce costly hospitalizations and unnecessary emergency department (ED) visits. This request seeks to:

- Ensure 12 months of continuous Medicaid coverage for adults leaving a DOC facility;
- Promote longer-term access to and continuity of physical and behavioral health care and care coordination;
- Combat racial inequities; and
- Improve short and long-term physical and behavioral health outcomes and reduce recidivism for adults leaving a Colorado DOC facility.

Health Care Delivery

Health First Colorado is a Medicaid insurance program that provides access to physical and behavioral health care, hospitalization, nursing facility care, prescription drugs, dental care and other benefits for qualifying adults and children. Physical health services are paid for through the traditional fee-for-service structure through HCPF. While behavioral health and care coordination services are capitated and provided by MCEs through contracts with HCPF. The MCEs have data sharing agreements with the Department of Corrections to better support members as they transition to community.

Since 2011, the Accountable Care Collaborative (ACC) has served as the core vehicle for delivering and managing member care for Health First Colorado. All full-benefit Health First Colorado members are enrolled in the ACC except for members enrolled in the Program for All Inclusive Care for the Elderly. The ACC integrates managed fee-for-service physical health care and managed care for behavioral health. The ACC's regional model allows it to be responsive to unique community needs. Key components of the ACC include care coordination and member support.

The health care delivery system is not anticipated to change under this amendment.

Eligibility



Re-Entry Initiative:

Suspension of Coverage. As noted above, in the prison system, there is a manual process for moving eligibility from a full Medicaid benefit package to a limited inpatient benefit package. However, in the youth detention facilities, there is no formal process. The State is interested in automating the “suspend” functionality for Medicaid members in DOC. In addition, DOC staff will need to increase their timeframe for review of documents to ensure all eligible members are actively enrolled in Medicaid to access 90-day pre-release benefits. DYS staff will need to implement practices to identify Medicaid-eligible youth to ensure access to 90-day pre-release services status with the additional component of notifying the individual of status.

As is required for JI 1115 Demonstrations, HCPF will work to maintain and enhance eligibility processes to ensure individuals who were enrolled in Medicaid at the time they entered the correctional system can have their coverage quickly and easily reinstated as part of pre-release planning, and ensure that for those who were not enrolled in Medicaid when entering the correctional system, the State will improve its eligibility process for Medicaid coverage applicable to all individuals leaving a prison or jail setting, ensuring that individuals receive assistance with completing and submitting an application for Medicaid, unless the individual declines such assistance or wants to decline enrollment.

If an individual who is incarcerated would be eligible for CHIP if not for their incarceration status, and qualify to receive pre-release services, then pre-release services will be covered under this amendment.

Re-entry Demonstration Initiative populations are defined as persons who are enrolled in Medicaid or who would be eligible for CHIP except for their incarceration status, or who are incarcerated in a State prison or juvenile facility who meet the eligibility criteria below. Like Washington, no specific health condition is required for demonstration eligibility. To receive services under the Re-entry Demonstration, a beneficiary will meet the following qualifying criteria:

- Meet the definition of an inmate of a public institution, as specified in 42 CFR 435.1010, and be incarcerated in a State prison or juvenile facility;
- Be enrolled in Medicaid or otherwise eligible for CHIP if not for their incarceration status; and
- Identified as expected to be released in the next 90 days and identified for participation in the Demonstration.

SMI/SED Initiative:

All enrollees eligible for a mandatory or optional eligibility group approved for full Medicaid coverage would be eligible for stays in an IMD under the Demonstration. Only the eligibility groups outlined in Table 1 below will not be eligible for stays in an IMD as they receive limited Medicaid benefits only.



Table 1: Eligibility Groups Excluded from the Demonstration

Eligibility Group	Social Security Act and CFR Citations
Limited Services Available to Certain Aliens	42 CFR §435.139
Qualified Medicare Beneficiaries	1902(a)(10)(E)(i) 1905(p)
Specified Low Income Medicare Beneficiaries	1902(a)(10)(E)(iii)
Qualified Individual Program	1902(a)(10)(E)(iv)
Qualified Disabled Working Individual Program	1902(a)(10)(E)(ii) 1905(s)
Presumptively Eligible Pregnant Women	1920 42 CFR §435.1103

Continuous Eligibility: The proposed continuous eligibility policy will apply to Medicaid-enrolled children with incomes up to 215 percent of the federal poverty level (FPL), CHP+ children with incomes up to 260 percent FPL, and children who would be eligible for medical assistance coverage but are not because of their immigration status. Once enrolled in Medicaid or CHP+, these children will remain continuously enrolled during their first three years of life without regard to family income. Additionally, Medicaid-eligible adults leaving a Colorado DOC facility will remain continuously eligible for Medicaid without regard to income for a period of 12 months beginning on the date of release.

HCPF will continue disenrollment of individuals who move out of state, request voluntary disenrollment, had initial eligibility erroneously determined, or die. The Demonstration will have no enrollment limits and no other eligibility modifications are proposed under this amendment.

Benefits

Through this amendment, HCPF proposes to provide the following services to incarcerated individuals during the 90 days prior to their release date:

- Case management (care coordination) services that include physical and behavioral health clinical screenings and consultation services;
- A 30-day supply of prescription medications and medication administration post release; and
- MAT for all FDA-approved medications (including counseling and long acting injectables).

Additionally, HCPF proposes to reimburse the first 15-days of acute psychiatric care stays in an IMD that exceed the current 15-day limit under “in lieu of service” authority.

The continuous eligibility provisions will not affect benefits under the demonstration.

Cost Sharing



There are no proposed changes to cost sharing under this amendment.

Delivery System

No changes to Colorado's delivery system are proposed under this amendment. Benefits will continue to be managed by the state's MCEs.

Demonstration Hypotheses and Measures

Re-entry Initiative

With the help of the independent evaluator, the State will amend the approved SUD evaluation plan for evaluating the hypotheses indicated below. The State will calculate and report all performance measures under the Demonstration. The State will submit the updated SUD evaluation plan to CMS for approval.

The State will conduct ongoing monitoring of this Demonstration related to the five Re-entry milestones as required in CMS guidance and will provide information regarding monitoring activities in the required quarterly and annual monitoring reports.

By providing Medicaid coverage prior to an individual's release from incarceration, the State will be able to bridge relationships between community-based Medicaid providers and JI populations prior to release, thereby improving the likelihood that individuals with a history of BH conditions and/or chronic diseases will receive stable and continuous care. The following hypotheses and goals will be tested during the approval period:

Hypotheses: The full 90-day timeline will enable the State to support pre-release identification, stabilization, and management of certain serious physical and BH conditions that may respond to ambulatory care and treatment (e.g., diabetes, heart failure, hypertension, schizophrenia, SUDs) which could reduce post-release acute care utilization.

By allowing early interventions to occur in the full 90-day period immediately prior to expected release, such as for certain BH conditions and including stabilizing medications like long-acting injectable antipsychotics and medications for addiction treatment for SUDs, the State expects that it will be able to reduce decompensation, suicide-related deaths, overdoses, and overdose related deaths in the near-term post-release.

Questions: The State will test, and comprehensively evaluate through robust hypothesis testing, the effectiveness of the extended full 90-day coverage period before the beneficiary's expected date of release on achieving the articulated goals of the initiative:

- Increase coverage, continuity of coverage, and appropriate service uptake through assessment of eligibility and availability of coverage for benefits in carceral settings just prior to release;
- Improve access to services prior to release and improve transitions and continuity of care into the community upon release and during re-entry;
- Improve coordination and communication between correctional systems, Medicaid systems, administrative services organizations, and community-based providers;



- Increase additional investments in health care and related services, aimed at improving the quality of care for beneficiaries in carceral settings and in the community to maximize successful re-entry post-release;
- Improve connections between carceral settings and community services upon release to address physical health, BH, and HRSN;
- Reduce all-cause deaths in the near-term post-release; and
- Reduce the number of ED visits and inpatient hospitalizations among recently released Medicaid beneficiaries through increased receipt of preventive and routine physical and BH care.

Data Source: Claims/encounter data.

Evaluation Design: Independent evaluator will design quantitative and qualitative measures to include quasi-experimental comparisons and interrupted time series analysis.

Severe Mental Illness Initiative

The State's Independent Evaluator will work with CMS to amend the Demonstration evaluation design. Below are proposed hypotheses for this initiative. The specific evaluation methodology will be submitted with the updated Evaluation Design upon approval of the amendment.

Hypothesis	Evaluation Questions	Evaluation Parameters/Methodology
Goal 1: Reduced utilization and lengths of stay in EDs among Medicaid beneficiaries with SMI or SED while awaiting mental health treatment in specialized settings.		
The demonstration will result in reductions in utilization and length of stays in EDs among Medicaid beneficiaries with SMI or SED while awaiting mental health treatment.	<ul style="list-style-type: none"> • Does the demonstration result in reductions in utilization and lengths of stay in EDs among Medicaid beneficiaries with SMI or SED while awaiting mental health treatment in specialized settings? • How does the demonstration effect utilization reduction and lengths of stay in EDs among Medicaid beneficiaries with SMI/SED by geographic area or beneficiary characteristics? • How do demonstration activities contribute to reductions in utilization and lengths of stays in EDs among Medicaid beneficiaries with SMI/SED while awaiting mental health treatment in specialized settings? 	<p>Data Sources:</p> <ul style="list-style-type: none"> • Claims data • Medical or administrative records • Interviews or focus groups <p>Analytic Approach:</p> <ul style="list-style-type: none"> • Difference-in- differences model • Subgroup analyses • Qualitative analysis
Goal 2: Reduced preventable readmissions to acute care hospitals and residential settings.		



Hypothesis	Evaluation Questions	Evaluation Parameters/Methodology
The demonstration will result in reductions in preventable readmissions to acute care hospitals and residential settings.	<ul style="list-style-type: none"> Does the demonstration result in reductions in preventable readmissions to acute care hospitals and residential settings (including short-term inpatient and residential admissions to both IMDs and non-IMD acute care hospitals, critical access hospitals, and residential settings)? How does the demonstration effect preventable readmissions to acute care hospitals and residential settings by geographic area or beneficiary characteristics? How do demonstration activities contribute to reductions in preventable readmissions to acute care hospitals and residential settings? Does the demonstration result in increased screening and intervention for comorbid SUD and physical health conditions during acute care psychiatric hospital and residential setting stays and increased treatment for such conditions after discharge? 	<p>Data Sources:</p> <ul style="list-style-type: none"> Claims data Interviews or focus groups Medical records Beneficiary survey <p>Analytic Approach:</p> <ul style="list-style-type: none"> Difference-in- differences models Qualitative analysis Descriptive quantitative analysis
Goal 3: Improved availability of crisis stabilization services, including services made available through call centers and mobile crisis units; intensive outpatient services, as well as services provided during acute short-term stays in residential crisis stabilization programs, psychiatric hospitals, and residential treatment settings throughout the State.		



Hypothesis	Evaluation Questions	Evaluation Parameters/Methodology
The demonstration will result in improved availability of crisis stabilization services throughout the State.	<ul style="list-style-type: none"> To what extent does the demonstration result in improved availability of crisis outreach and response services (including crisis call centers, mobile crisis units, crisis observation/ assessment centers, and coordinated community crisis response teams) throughout the State? To what extent does the demonstration result in improved availability of intensive outpatient services and partial hospitalization? To what extent does the demonstration improve the availability of crisis stabilization services provided during acute short-term stays in each of the following: public and private psychiatric hospitals, residential treatment facilities, general hospital psychiatric units, and community-based settings? 	<p>Data Sources:</p> <ul style="list-style-type: none"> Annual assessments of availability of mental health services Area Health Resources File (AHRF) data National Mental Health Services (NMHSS) survey Administrative data Provider survey <p>Analytic Approach:</p> <ul style="list-style-type: none"> Descriptive quantitative analysis
Goal 4: Improved access to community-based services to address the chronic mental health care needs of beneficiaries with SMI or SED including through increased integration of primary and BH care.		
Access of beneficiaries with SMI/SED to community-based services to address their chronic mental health care needs will improve under the demonstration, including through increased integration of primary and BH care.	<ul style="list-style-type: none"> Does the demonstration result in improved access of beneficiaries with SMI/SED to community-based services to address their chronic mental health needs? To what extent does the demonstration result in improved availability of specific types of community-based services needed to comprehensively address the chronic needs of beneficiaries with SMI/SED? To what extent does the demonstration result in improved access of SMI/SED beneficiaries to specific types of community-based services that they need? 	<p>Data Sources:</p> <ul style="list-style-type: none"> Claims data Annual assessments of availability of mental health services AHRF NMHSS survey Administrative data Uniform Reporting System Child and Adult Core Set Medical records <p>Analytic Approach:</p> <ul style="list-style-type: none"> Descriptive quantitative analysis Chi-squared analysis Difference-in- differences model



Hypothesis	Evaluation Questions	Evaluation Parameters/Methodology
	<ul style="list-style-type: none"> How does the demonstration effect access to community-based services by geographic area or beneficiary characteristics? Does the integration of primary and BH care to address the chronic mental health care needs of beneficiaries with SMI/SED increase under the demonstration? 	
Goal 5: Improved care coordination, especially continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities.		
The demonstration will result in improved care coordination, especially continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities.	<ul style="list-style-type: none"> Does the demonstration result in improved care coordination for beneficiaries with SMI/SED? Does the demonstration result in improved continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities? Does the demonstration result in improved discharge planning and outcomes regarding housing for beneficiaries who are transitioning out of acute psychiatric care in hospitals and residential treatment facilities? How do demonstration activities contribute to improved continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities? 	<p>Data Sources:</p> <ul style="list-style-type: none"> Claims data Child and Adult Core Set Inpatient Psychiatric Facility Quality Reporting program Medical records Interviews or focus groups Facility records <p>Analytic Approach:</p> <ul style="list-style-type: none"> Difference-in- differences model Descriptive quantitative analysis Qualitative analysis

In addition to the independent evaluation, HCPF will provide quarterly and annual reporting specific to this amendment and in accordance with a CMS-approved Monitoring Protocol to be submitted following approval.



Continuous Eligibility Initiative

The State's Independent Evaluator will work with CMS to amend the Demonstration evaluation design. Below are proposed hypotheses for this initiative. The specific evaluation methodology will be submitted with the updated Evaluation Design upon approval of the amendment.

Population: Children zero to age three continuously enrolled in Medicaid and CHP+

Hypothesis	Evaluation Questions	Evaluation Parameters/Methodology
Goal 1: Ensure continuous Medicaid and CHP+ coverage for young children		
Continuous coverage will reduce churn and gaps in coverage for young children enrolled in Medicaid	Does continuous enrollment reduce gaps in coverage?	Examine Medicaid and CHP+ enrollment data by age to determine changes in insured rates and gaps in coverage over time.
Goal 2: Promote longer-term access to and continuity of physical health, BH, and dental care, and preventive services.		
Continuous coverage will increase preventive care utilization, primary care utilization and dental care visits.	Does continuous coverage improve utilization of preventive care and well child visits?	Analyze administrative claims data to determine changes in preventive care, well child visits, primary care visits.
Goal 3: Combat racial inequities.		
Continuous coverage will reduce churn and gaps in coverage for young children enrolled in Medicaid, including for racial and ethnic groups that experience disproportionately high rates of churn.	Does continuous enrollment reduce gaps in coverage for all racial and ethnic groups?	Examine Medicaid and CHP+ enrollment data by race and ethnicity to determine gaps in coverage over time.
Goal 4: Improve health outcomes and well-being for low-income young children.		
Coverage with fewer gaps in coverage for young children will result in improved health outcomes and well-being.	Does continuous coverage improve health outcomes and well-being?	Measures will be selected from the list of measures that HCPF is calculating as part of the development of our quality metrics program.

Population: Medicaid enrolled adults leaving a correctional facility

Hypothesis	Evaluation Questions	Evaluation Parameters/Methodology
Goal 1: Ensure 12 months of continuous Medicaid coverage for adults leaving a DOC facility.		



Hypothesis	Evaluation Questions	Evaluation Parameters/Methodology
Continuous coverage will reduce gaps in coverage for adults leaving a correctional facility.	Does 12 months of continuous enrollment reduce gaps in coverage?	Examine Medicaid enrollment data by age to determine changes in insured rates and gaps in coverage over time.
Goal 2: Promote longer-term access to and continuity of physical and BH care and care coordination.		
Continuous coverage will increase preventive, primary care, and BH engagement.	Does continuous coverage increase primary care and preventive service utilization and BH service utilization?	Measures will be selected from the list of measures the HCPF is calculating as part of the development of a Providers of Distinction quality metrics program.
Goal 3: Combat racial inequities.		
Continuous coverage will reduce churn and gaps in coverage for adults leaving correctional facilities and enrolled in Medicaid, including for racial and ethnic groups.	Does continuous coverage reduce gaps in coverage for all racial and ethnic groups?	Examine Medicaid enrollment data by race and ethnicity to determine gaps in coverage over time.
Goal 4: Improve short and long-term physical and BH outcomes and reduce recidivism for adults leaving a State DOC facility.		
Continuous coverage will reduce ED visits, hospitalizations, and crisis services.	Does continuous coverage reduce ED visits, hospitalizations, and crisis services?	Analyze administrative claims data to determine changes in preventive care, ED utilization, hospitalizations, crisis service utilization.

Proposed Federal Demonstration Authorities

Re-entry Initiative

The State seeks the following waiver authority as necessary under the Demonstration to receive a federal match on costs not otherwise matchable for services rendered to individuals who are incarcerated 90 days prior to their release. The State also requests the following proposed waivers authority to operate the Demonstration.

Waiver Authority	Reason and use of Waiver Authority will enable the State to:
Statewide Section 1902(a)(1) 42 CFR 431.50	To enable the State to provide pre-release services, as authorized under this Demonstration, to qualifying beneficiaries on a geographically limited basis according to the statewide implementation phase-in



Waiver Authority	Reason and use of Waiver Authority will enable the State to:
Amount, Duration, and Scope of Services and Comparability Section 1902(a)(10)(B) and 1902(a)(17)	plan, in accordance with the Re-entry Demonstration Initiative implementation plan. To enable the State to provide only a limited set of pre-release services, as specified in these STCs, to qualifying beneficiaries that are different than the services available to all other beneficiaries outside of carceral settings in the same eligibility groups authorized under the State Plan or the Demonstration.
Freedom of Choice Section 1902(a)(23)(A) 42 CFR 431.51	To enable the State to require qualifying beneficiaries to receive pre-release services, as authorized under this Demonstration, through only certain providers.
Requirements for Providers under the Medicaid State Plan Section 1902(a)(27) and 1902(a)(78)	To enable the State to not require carceral providers to enroll in State Medicaid, in order to provide, order, refer, or prescribe pre-release services as authorized under this Demonstration.
Title XXI Requirements Not Applicable to the Title XXI Expenditure Authority Above Requirements for Providers Under the State Plan Section 2107(e)(1)(D)	To enable the State to not require carceral providers to enroll in State CHIP, in order to provide, order, refer, or prescribe pre-release services as authorized under this Demonstration.

Expenditure Authority

The State requests expenditure authority to provide Medicaid benefits to Demonstration eligible individuals.

Title XIX Expenditure Authority	Expenditures
Expenditures Related to Pre-Release Services	Expenditures for pre-release services, as described in these STCs, are provided to qualifying Medicaid beneficiaries and beneficiaries who would be eligible for Medicaid if not for their incarceration status for up to 90 days immediately prior to the expected date of release from a participating State prison or juvenile facility.
Expenditures for Allowable Administrative Costs to Support the Implementation of Pre-Release Services	Expenditures for allowable administrative costs to support the implementation of pre-release services as outlined in the April 17, 2023, SMD letter #23-003 relating to administrative information technology (IT) and transitional, non-service expenditures, including administrative costs under an approved cost allocation plan.



Title XXI Expenditure Authority	Expenditures
Expenditures Related to Pre-Release Services	Expenditures for pre-release services, as described in the STCs, are provided to qualifying Demonstration beneficiaries who would be eligible for CHIP if not for their incarceration status, for up to 90 days immediately prior to the expected date of release from a participating State prison or juvenile facility.

Severe Mental Illness Initiative

The State requests expenditure authority to provide Medicaid benefits to Demonstration eligible individuals.

Title XIX Expenditure Authority	Expenditures
Expenditures Related to IMD services	Expenditures for otherwise covered Medicaid services furnished to otherwise eligible individuals, who are primarily receiving treatment for an SMI/SED who are short-term residents in facilities that meet the definition of an IMD.

Continuous Eligibility Initiative

Waiver Authority	Reason and use of Waiver Authority will enable the State to:
Section 1902(a) to the extent it incorporates 42 CFR 435.916 42 CFR 457.343 Waive redetermination of eligibility regardless of changes in circumstances for children aged zero until age three.	To enable the State to waive the annual redetermination requirements, including required procedures for reporting and acting on changes that would completely disenroll a children aged zero until age three from Medicaid and CHP+ (other than a change in residence to out of state, voluntary disenrollment, erroneously granted enrollment). The State will act on annual reported family income changes to re-assign children between Medicaid and CHP+ appropriately. Continuous enrollment for children at the time of application through the end of the month their third birthday falls.
Section 1902(a) to the extent it incorporates 42 CFR 435.916 Waive redetermination of eligibility regardless of changes in circumstances for 12 months prior the release from	To enable the State to waive the annual redetermination requirements, including required procedures for reporting and acting on changes to would completely disenroll an adult.



Waiver Authority	Reason and use of Waiver Authority will enable the State to:
correctional facilities for adults aged 19 and over.	12 Month Continuous Eligibility for adults leaving incarceration age 19 and over.

Title XIX Expenditure Authority	Expenditures
Continuous enrollment for children at the time of application through the end of the month their third birthday falls.	Expenditures for continuous enrollment for Medicaid and CHIP children: authority to receive FFP for the continuous enrollment of Medicaid and CHIP children, even if a child's family income exceeds eligibility limits. The State will act on annual reported family income changes to re-assign children between CHP+ and Medicaid appropriately.
12 Month continuous enrollment for adults leaving incarceration age 19 and over.	Expenditures for 12 months of continuous enrollment for adults leaving incarceration aged 19 and over.

Estimated Impact of the Demonstration

The proposed demonstration will impact the annual enrollment for each of the populations included in the demonstration proposals. Enrollment projections are shown through the tables below through estimated number of member months (months of eligibility) for each MEG impacted by the demonstration proposal over the five-year demonstration period.

Estimated Projections of Annual Enrollment

Member Months under the Amendment*	DY5	DY6	DY7	DY8	DY9	5 year total
Total projected member months without the Amendment	0	0	0	0	0	
Total projected member months under the Amendment	8,208	568,240	582,531	588,356	594,240	2,341,575

*Using a 1% caseload growth rate; SMI/SED and Re-Entry Initiative effective July 1, 2025 (six-months of (DY5)); Continuous eligibility effective January 1, 2026 (DY6)

The table below estimates the projected annual expenditures (without and with the waiver) for each DY.

Estimated Projections of Annual Expenditures

Projected Services Costs under the Amendment*	DY5	DY6	DY7	DY8	DY9	5 year total
Total projected costs without the Amendment	0	0	0	0	0	0



Total projected
costs under the
Amendment

\$129,581,634 \$290,878,023 \$274,509,519 \$211,782,255 \$224,808,729 \$ 1,131,560,160

*Using a 5.1% trend rate; SMI/SED and Re-Entry Initiative effective July 1, 2025 (six-months of (DY5)); Continuous eligibility effective January 1, 2026 (DY6)

Demonstration Proposal: Federal Financial Participation (FFP) for up to 15 days for non-SUD IMD stays that exceed 15 days - Effective July 1, 2025 (six-months of DY5)

	DY5	DY6	DY7	DY8	DY9	5-Year Total
MEG 1 - Non-Expansion Adults						
Demonstration Member Months	3	6	6	6	6	27
Per Capita (PMPM)	\$39.79	\$41.81	\$43.95	\$46.19	\$48.54	\$47.30
Projected Demonstration Expenditures	\$124	\$263	\$279	\$296	\$315	\$1,277
MEG 2 - Expansion Adults						
Demonstration Member Months	38	78	78	79	80	353
Per Capita (PMPM)	\$56.82	\$59.72	\$62.76	\$65.97	\$69.33	\$63.73
Projected Demonstration Expenditures	\$2,182	\$4,633	\$4,918	\$5,221	\$5,542	\$22,496
Demonstration Proposal Enrollment, Per Capita and Expenditure Projection Notes:						
1) DY5 represents a 12-month period between 1/1/2025 - 12/31/2025; however, IMD services begin 7/1/2025. The DY5 PMPM represents a six-month period.						
2) The non-SUD IMD services for up to 15 days will be covered by the behavioral health capitated program. All other services covered via fee-for-service (FFS). The per capita reflects the weighted average of the BH rate impact plus the FFS expenditures in the month the individual is inpatient in a non-SUD IMD.						

Demonstration Proposal: Pre-Release for Individuals Prior to Release from Juvenile facility or Colorado Department of Corrections - Effective July 1, 2025 (six-months of DY5)

	DY5	DY6	DY7	DY8	DY9	5-Year Total
MEG 3 -Justice-Involved Youth						
Demonstration Member Months	79	80	81	82	83	405
Per Capita (PMPM)	\$896.59	\$942.32	\$990.38	\$1,040.89	\$1,093.97	\$994.05
Projected Demonstration Expenditures	\$70,831	\$75,386	\$80,221	\$85,353	\$90,800	\$402,591
MEG 4 - Non-Expansion Adults						
Demonstration Member Months	276	279	282	285	288	1,410
Per Capita (PMPM)	\$886.52	\$931.73	\$979.25	\$1,029.19	\$1,081.68	\$982.71
Projected Demonstration Expenditures	\$244,678	\$259,952	\$276,147	\$293,318	\$311,523	\$1,385,618



MEG 5 - Expansion Adults						
Demonstration Member Months	7,812	7,890	7,969	8,049	8,129	39,849
Per Capita (PMPM)	\$934.30	\$981.95	\$1,032.02	\$1,084.66	\$1,139.98	\$1,035.60
Projected Demonstration Expenditures	\$7,298,723	\$7,747,550	\$8,224,205	\$8,730,412	\$9,266,861	\$41,267,751
Administrative Information Technology - Total Computable Aggregate Annual Limits						
Admin/FTE Costs (50% FFP)	\$320,000	\$475,000	\$551,500	\$578,000	\$636,000	\$2,560,500
Systems Costs (90/10 or 75/25 FFP)	\$550,000	\$110,000	\$27,500	\$27,500	\$27,500	\$742,500
Total Administration Costs	\$870,000	\$585,000	\$579,000	\$605,500	\$663,500	\$3,303,000
Demonstration Proposal Enrollment, Per Capita and Expenditure Projection Notes:						
1) DY5 represents a 12-month period between 1/1/2025 - 12/31/2025; however, pre-release services begin 7/1/2025. The DY5 PMPM represents a six-month period.						
2) As developed, pre-release services will be provided through fee-for-service.						

Demonstration Proposal: Continuous Eligibility for Children (Under age 18) who are less than 3 years old - Effective January 1, 2026 (DY6)

	DY5	DY6	DY7	DY8	DY9	5-Year Total
MEG 6 - Medicaid Children						
Demonstration Member Months	n/a	535,475	540,830	546,238	551,700	2,174,243
Per Capita (PMPM)	n/a	\$317.26	\$333.44	\$350.44	\$368.32	\$342.58
Projected Demonstration Expenditures	n/a	\$169,883,723	\$180,333,270	\$191,425,570	\$203,200,157	\$744,842,720
Demonstration Proposal Enrollment, Per Capita and Expenditure Projection Notes:						
1) Continuous coverage begins January 1, 2026 (DY6).						

Demonstration Proposal: Continuous Coverage for Eligible Individuals Released from a Department of Corrections (DOC) facility for a period of 1 year beginning on the date of the individual's release - Effective January 1, 2026 (DY6)

	DY5	DY6	DY7	DY8	DY9	5-Year Total
MEG 7 - Justice-Involved Youth						
Demonstration Member Months	n/a	302	439	443	448	1,632
Per Capita (PMPM)	n/a	\$698.49	\$734.12	\$771.56	\$810.91	\$758.89
Projected Demonstration Expenditures	n/a	\$210,945	\$322,292	\$342,117	\$363,160	\$1,238,514
MEG 8 - Non-Expansion Adults						
Demonstration Member Months	n/a	762	1,055	1,065	1,076	3,958
Per Capita (PMPM)	n/a	\$1,752.55	\$1,841.93	\$1,935.87	\$2,034.60	\$1,902.19
Projected Demonstration Expenditures	n/a	\$1,335,445	\$1,942,539	\$2,062,025	\$2,188,860	\$7,528,869



MEG 9 - Expansion Adults						
Demonstration Member Months	n/a	23,368	31,791	32,109	32,430	119,698
Per Capita (PMPM)	n/a	\$182.90	\$192.23	\$202.03	\$212.34	\$198.49
Projected Demonstration Expenditures	n/a	\$4,274,080	\$6,111,160	\$6,487,057	\$6,886,076	\$23,758,373
Administrative Information Technology - Total Computable Aggregate Annual Limits						
Admin/FTE Costs (50% FFP)	\$1,200,000	\$1,386,000	\$1,524,500	\$1,677,000	\$1,845,000	\$7,632,500
Systems Costs (90/10 or 75/25 FFP)	\$1,100,000	\$220,000	\$55,000	\$55,000	\$55,000	\$1,485,000
Total Administration Costs	\$2,300,000	\$1,606,000	\$1,579,500	\$1,732,000	\$1,900,000	\$9,117,500

Opportunity for Public Comment

The proposed Section 1115 Demonstration amendment is available for public review and comment at:

[1115 SUD Demonstration Amendment Request](#)

To request a copy of the amendment, please contact HCPF by:

- Sending an email request to hcpf_1115waiver@state.co.us;
- Sending a request by fax to 303-866-4411, Attn: 1115 SUD Demonstration Amendment; or
- Obtaining in person at the Colorado Department of Health Care Policy and Financing, 303 E 17th Avenue, Denver, CO 80203.

During the public comment period, comments may be sent to hcpf_1115waiver@state.co.us. Public comments may also be submitted by post to:

Director, Health Programs Office

Colorado Department of Health Care Policy and Financing

303 E 17th Avenue

Denver, Colorado 80203

ATTN: Public Comment - 1115 SUD Demonstration Amendment

Additional information will be posted on HCPF's *Ensuring a Full Continuum of SUD Benefits* webpage, at <https://hcpf.colorado.gov/1115sudwaiver>.

Public Hearings



	Public Hearing #1	Public Hearing #2
Date	February 7, 2024	February 8, 2024
Time	3pm-5pm MST	9am-11am MST
Venue	Pueblo City-County Library District - Patrick A. Lucero Branch, 1315 E 7th St, Pueblo, CO 81001 Lucero Large Community Room	Colorado Department of Health Care Policy and Financing 303 E 17th Ave, Denver, CO 80203 Room 11B
Teleconference	833-548-0276	833-548-0276
Webinar	https://us06web.zoom.us/webinar/register/WN_patMQrKgRGCqeqXh2tE_Pg	https://us06web.zoom.us/webinar/register/WN_L3BlfI8KSGyxxQm5gY3bdQ

Reasonable accommodations will be provided upon request. Auxiliary aids and services for individuals with disabilities and language services for individuals whose first language is not English may be provided upon request. Please notify 303-866-3438 or the 504/ADA Coordinator at hcpf504ada@state.co.us at least one week prior to the meeting to make arrangements.

Relevant webpages and additional information regarding the Medicaid Demonstration can be viewed on the CMS/Medicaid website, at: <https://www.medicaid.gov/medicaid/section-1115-demo/index.html>

This notice is submitted pursuant to Title 42 Code of Federal Regulations, Part 431.408, Subpart G, which outlines public notice processes and transparency requirements for Section 1115 Demonstrations.

Nonrulemaking Public Notices and other Miscellaneous Rulemaking Notices

Filed on 01/24/2024

Department

Department of Health Care Policy and Financing

Agency

Medical Services Board (Volume 8; Medical Assistance, Children's Health Plan)

Colorado Medicaid Coverage for Justice-Involved Population Re-entry, Severe Mental Illness, and Continuous Eligibility

Substance Use Demonstration Amendment Request

Demonstration Project No. 11-W-00336/8
Effective January 1, 2021, through December 31, 2025

January 25, 2024



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Section I. Introduction

Program Description and Objectives

The Department of Health Care Policy and Financing (HCPF) is requesting an 1115 waiver Amendment (Amendment) for their Substance Use Disorder (SUD) Demonstration “Expanding the Substance Use Disorder Continuum of Care,” Waiver #: 11-W-00336/8 from the Centers for Medicare and Medicaid Services (CMS). The initial SUD waiver period is from January 1, 2021, through December 31, 2025.

The Amendment request seeks to authorize three program initiatives:

1. Prerelease services for adults and youth transitioning from correctional facilities to begin July 1, 2025. Colorado (State) is requesting this authority to design and implement a “Re-entry Initiative,” similar to the authority granted to California on January 26, 2023, to provide:
 - A. **Medicaid Coverage** for eligible individuals in the State’s prisons and juvenile correctional facilities. Eligible individuals include any individual exiting those facilities who is eligible for Medicaid.
 - B. **A Targeted Benefit Package** for these individuals to include case management services, medication-assisted treatment (MAT) for SUD, a 30-day supply of medications upon release, and certain other supportive services.
 - C. **A Coverage Period of up to 90 Days** immediately prior to the release of the incarcerated individual from the correctional system.
2. Severe Mental Illness Initiative to begin July 1, 2025— Reimbursement for acute inpatient and residential stays in institutions for mental disease (IMD) for individuals diagnosed with a serious mental illness (SMI) or serious emotional disturbance (SED).
3. Continuous Eligibility Initiative to begin January 1, 2026 —
 - A. Extending continuous Medicaid CHP+ coverage for children to age three.
 - B. Extending 12 months of continuous Medicaid coverage for adults leaving incarceration from a Department of Corrections facility.

This suite of coverage provisions and services will be implemented across the State, creating and strengthening connections between carceral settings, government agencies, health and social service entities, and many others — all collaborating to better support individuals’ health, through an improved re-entry into the community while maintaining their health and well-being, a complete continuum of care for individuals with SMI, and continuous eligibility for children to age three and adults leaving incarceration.

Goals of Each Requested Initiative

Re-entry Initiative

Consistent with the CMS goals as outlined in the April 17, 2023, State Medicaid Director (SMD) letter, the State's specific goals for the Re-entry Initiative are to:

1. **Increase coverage, continuity of coverage, and appropriate service uptake** through assessment of eligibility and availability of coverage for benefits in carceral settings just prior to release;
2. **Improve access to services** prior to release and improve transitions and continuity of care into the community upon release and during re-entry;
3. **Improve coordination and communication** between correctional systems, Medicaid systems, administrative services organizations, and community-based providers;
4. **Increase additional investments in health care and related services**, aimed at improving the quality of care for beneficiaries in carceral settings and in the community to maximize successful re-entry post-release;
5. **Improve connections between carceral settings and community services** upon release to address physical health, behavioral health (BH), and health-related social needs (HRSN);
6. **Reduce all-cause deaths** in the near-term post-release; and
7. **Reduce the number of emergency department (ED) visits and inpatient hospitalizations** among recently incarcerated Medicaid beneficiaries through increased receipt of preventive and routine physical and BH care.

The State intends to implement the Demonstration statewide on or after July 1, 2025. The State requests to operate the Demonstration through the end of the current SUD Demonstration approval period, which is December 31, 2025. This amendment request provides a detailed overview of coverage and service provisions, as well as Re-entry initiative objectives, financing, implementation, and monitoring/evaluation.

Severe Mental Illness Initiative

Overview

In November 2020, HCPF received approval of its "Expanding the Substance Use Disorder (SUD) Continuum of Care" §1115 Demonstration in furtherance of the State's objective to complete the State SUD continuum of care. Through this amendment, HCPF seeks to expand this authority to reimburse for acute inpatient and residential stays in IMD for individuals diagnosed with a SMI or SED. This request is part of the State's ongoing efforts to reform its system to develop a comprehensive BH safety net.

Currently, the State utilizes "in lieu of" authority through its managed care contracts with managed care entities (MCE) to provide IMD reimbursement for stays of up to 15 days in a calendar month. This authority provides sufficient coverage for most acute psychiatric

inpatient stays. However, there remain IMD stays that exceed the 15-day limit due to issues such as patient acuity and additional time needed to ensure a safe and appropriate transition to community-based services. In these cases, the State is not able to cover any portion of the stay.

Through this amendment, HCPF seeks authority to reimburse the first 15-days of stays that exceed the current limit under “in lieu of authority.” This will permit the State to modify its current practice through which a prorated capitation payment is made to the MCE for the days within the month that the enrollee was not in an IMD and the MCE’s subsequent payment recoupment from the IMD for the entire stay.

By addressing current financial losses experienced by IMDs for these stays, HCPF anticipates several benefits. For example, the following potential opportunities were identified through focus groups with current IMDs operating in the State:

- Increased provider investments in step-down services such as intensive outpatient or partial hospitalization.
- Prevent closure of adult inpatient IMD beds.
- Potential ability to increase wages to attract the needed workforce.

HCPF requests an effective date of July 1, 2025, for the IMD component of this amendment.

The State’s goals are aligned with those of CMS for this waiver opportunity, including:

- Reduced utilization and lengths of stay in EDs among Medicaid beneficiaries with SMI or SED while awaiting mental health treatment in specialized settings.
- Reduced preventable readmissions to acute care hospitals and residential settings.
- Improved availability of crisis stabilization services including services made available through call centers and mobile crisis units, intensive outpatient services, as well as services provided during acute short-term stays in residential crisis stabilization programs, psychiatric hospitals, and residential treatment settings throughout the State.
- Improved access to community-based services to address the chronic mental health care needs of beneficiaries with SMI or SED including through increased integration of primary and BH care.
- Improved care coordination, especially continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities.

Continuous Eligibility Initiative

State House Bill 23-1300 directed the HCPF, by April 1, 2024, to seek Federal authority to provide continuous Medicaid coverage for children up to age three and for twelve months for adults who have been released from a State Department of Corrections facility, regardless of any change in income during that time.¹ Through this legislation, the State aims to improve the health and well-being of Coloradans through consistent access to comprehensive physical and BH benefits, during critical periods in life. Continuous coverage assists children in healthy early development and strengthens overall mental health through regular connections with

¹Continuous Eligibility Medical Coverage Act, HB23-1300. 2023 Colorado State Legislative Session. Retrieved from <https://leg.colorado.gov/bills/hb23-1300>

the health system. Additionally, ensuring continuous coverage for previously incarcerated adults not only improves health outcomes but supports BH and may also improve public safety by reducing rates of recidivism. For example, adults with SUD convictions have a greater risk of criminal re-involvement and recidivism.²

Background

State Medicaid Program

The Medicaid program in the State, known as Health First Colorado, covered approximately 1.6 million Coloradans during 2022. This means roughly 26.9% of the State's population was enrolled in Health First Colorado³. Of those enrolled, over 37% were children and adolescents (covered by Health First Colorado and Child Health Plan *Plus*)⁴. These programs covered 43% of all births in the State in calendar year (CY) 2021.

Health First Colorado is a Medicaid insurance program that provides access to physical and BH care, hospitalization, nursing facility care, prescription drugs, dental care and other benefits for qualifying adults and children. HCPF pays for physical health services through a fee-for-service (FFS) structure while BH and care coordination services are capitated and provided by Regional Accountable Entities (RAEs) through contracts with HCPF. The RAEs have data sharing agreements with the Department of Corrections to better support members as they transition to the community.

Since 2011, the Accountable Care Collaborative (ACC) has served as the core vehicle for delivering and managing member care for Health First Colorado. All full-benefit Health First Colorado members are enrolled in the ACC except for members enrolled in the Program for All Inclusive Care for the Elderly. The ACC integrates managed FFS physical health care and managed care for BH. The ACC's regional model (divided into seven RAEs) allows it to be responsive to unique community needs. Key components of the ACC include care coordination and member support.

Children and pregnant people in the CHP+ are enrolled in one of four fully capitated managed care organizations.

Re-entry Initiative

In October 2018, Congress passed the Substance Use Disorder Prevention that Promotes Opioid Recovery and Treatment for Patients and Communities Act (the "SUPPORT Act") in response to the imperative to implement concrete changes to address the opioid epidemic. Per the SUPPORT Act, Congress required the Department of Health and Human Services (DHHS) to convene a stakeholder group to develop best practices for ensuring continuity of coverage and relevant social services for individuals who are incarcerated and transitioning to the community. The legislation also directed DHHS to work with states to develop innovative strategies to help such individuals enroll in Medicaid and to, within a year of enactment, issue

² NIDA. (2020) *Criminal Justice DrugFacts*. National Institute on Drug Abuse. Retrieved from: <https://nida.nih.gov/publications/drugfacts/criminal-justice>

³ Health Care Policy & Financing (HCPF) (2023) *State of Colorado Fact Sheet*. Colorado Department of Health Care Policy & Financing. Retrieved from: <https://hcpf.colorado.gov/sites/hcpf/files/Statewide%20Fact%20Sheet.pdf>

⁴ Health Care Policy & Financing (HCPF) (2023) *Health Care Policy & Financing Report to the Community Fiscal Year 2021-2022*. Colorado Department of Health Care Policy & Financing. Retrieved from: <https://hcpf.colorado.gov/2022-report-to-community>

an SMD letter regarding opportunities to design section 1115 Demonstration projects to improve care transitions to the community for incarcerated individuals who are eligible for Medicaid. On April 17, 2023, CMS published an SMD letter outlining the opportunities to test transition-related strategies to support community re-entry and improve care transitions for individuals who are incarcerated. This letter, plus the approval of California's Demonstration amendment for incarcerated individuals, provides guidance for the development and submission of this 1115 Demonstration amendment for incarcerated individuals who are transitioning to release. The State is seeking to collaborate with DHHS to develop an innovative Demonstration that will help to ensure continuity of care when the State's justice-involved (JI) populations transition from incarceration to the community under this new guidance.

National data has shown that the JI population contains a disproportionate number of persons with BH conditions (i.e., SUDs and mental health disorders), as well as HIV and other chronic diseases. Nationally, an estimated 80% of individuals released from prison in the United States each year have an SUD or chronic medical or psychiatric condition.⁵ In 2011-2012, half of people in state and federal prison and local jails reported ever having a chronic condition.⁶ 21% of people in prisons and 14% of people in jail reported ever having an infectious disease, including tuberculosis, hepatitis B and C, and other sexually transmitted diseases, compared with 4.8% of the general population.⁷ **In the first two weeks following release from incarceration, individuals are 129 times more likely to die from an overdose than their peers in the community, and they often have higher rates of cardiac conditions, diabetes, Hepatitis C, mood, and anxiety disorders as well as severe and persistent mental illness.**⁸

In addition, according to the Bureau of Justice Statistics, 53% of all state prisoners and 45% of all federal prisoners meet the Diagnostic and Statistical Manual of Mental Disorders, Fourth Revision, criteria for drug dependence.⁹ Estimates for the jail population indicate that 47% have issues with alcohol use and 53% suffer from drug dependency or abuse.¹⁰

The JI population also suffers from mental and BH issues. According to the Bureau of Justice Statistics, in 2005, 56% of people in state prison, 45% of people in federal prison, and 64% of people in jail reported symptoms of a mental health disorder.¹¹

As of 2023, there were over 17,000 individuals incarcerated in 21 State prisons. The average stay in state prisons is 33 months, and over 94% of prisoners are male. There are approximately 5,883 releases per year, with 4,070-5,295 of those released likely eligible for Medicaid.

There are 15 State Department of Youth Corrections facilities that provide onsite health care and contract with outside providers. There are approximately 242 individuals released from these facilities annually, with 126-163 individuals eligible for Medicaid.

⁵ Shira Shavit et al., "Transitions Clinic Network: Challenges and Lessons in Primary Care for People Released from Prison," *Health Affairs* 36, no. 6 (June 2017): 1006-15

⁶ L. Maruschak, M. Bersofsky, and J. Unangst. *Medical Problems of State and Federal Prisoners and Jail Inmates*. Bureau of Justice Statistics Special Report (NCJ 248491), U.S. Department of Justice, February 2015

⁷ *Ibid*

⁸ Binswanger IA, Stern MF, Deyo RA, Heagerty PJ, Cheadle A, Elmore JG, Koepsell TD. Release from prison--a high risk of death for former inmates. *N Engl J Med*. 2007 Jan 11;356(2):157-65. doi: 10.1056/NEJMsa064115. Erratum in: *N Engl J Med*. 2007 Feb 1;356(5):536. PMID: 17215533; PMCID: PMC2836121.

⁹ Mumola, C. and Karberg, J. *Drug Use and Dependence, State and Federal Prisoners, 2004*. Bureau of Justice Statistics Special Report (NCJ213530), U.S. Department of Justice, October 2006

¹⁰ Karberg, K. C., James, D. J. *Substance Dependence, Abuse, and Treatment of Jail Inmates, 2002*. Bureau of Justice Statistics Special Report (NCJ 209588), U.S. Department of Justice, July 2005.

¹¹ James, D. and Glaze, L. *Mental Health Problems of Prison and Jail Inmates*. Bureau of Justice Statistics Special Report (NCJ 213600), U.S. Department of Justice, September 2006. Available at: http://www.bjs.gov/index.cfm?ty_pbdetail&iid_789

The State believes uninterrupted health coverage is imperative to ensure this high-risk, high-need population receives much-needed care as individuals transition back to their communities. If approved, this specific Demonstration will allow the State to leverage existing eligibility processes, improve suspension of benefits procedures, and more seamlessly transition incarcerated individuals to the appropriate Medicaid program during the 90 days prior to release from incarceration. Providing MAT is an essential service for individuals who experience forced abstinence, such as those in jails and prisons. Individuals with SUDs or substance-related criminal charges who are reentering the community are at greater risk of criminal re-involvement and recidivism, underscoring that addressing public health needs may help advance public safety outcomes and reduce future incarceration.

The State has undertaken significant reform efforts designed to improve outcomes, services, and care for the JI population. In 2022, the Legislature committed to exploring federal authorities to improve outcomes for this population through Senate Bill 22-196. Recommendations for developing a State Section 1115 Re-entry Demonstration align with CMS' overall objectives to increase equitable access to quality health care for individuals in the re-entry period, improve care transitions from carceral settings, and reduce unnecessary emergency room usage and preventable deaths upon release. Research from Senate Bill 22-196 had the following findings:

- As of 2023, there were over 17,000 individuals incarcerated in the State's 21 prisons.¹²
- The average length of stay in state prisons is 33 months, and over 94% of prisoners are male.¹³
- The State prison health care delivery system provides physical health, mental health, dental, vision, and pharmaceutical services. A third-party contractor typically manages acute or emergency services delivered outside the prison.
- There are 61 county and municipal jails in the State which house over 10,000 inmates. The average length of stay is 45 days for felonies and 17 days for misdemeanors.¹⁴
- Health care delivered in the State jails varies by county, and sometimes jails within counties, but this is primarily focused on physical health and BH. Several jails participate in the State's Jail Based Behavioral Health Services program, funded through the Behavioral Health Administration (BHA).
- There are 15 Department of Youth Corrections facilities, managed by the Colorado Department of Human Services (CDHS) Office of Child and Youth Services (OCYF) that provide onsite health care and contract with outside providers.¹⁵

Six stakeholder groups were interviewed and all recommended that HCPF pursue a Section 1115 Medicaid Re-entry Demonstration. The following recommendations emerged from stakeholder interviews:

Services should include durable medical equipment (DME), transportation, Health Related Social Needs (HRSN) (particularly housing), transition services, and Medication Assisted Treatment (MAT). MAT treatment will be included in the benefit package offered as part of

¹² "Statistics," Department of Corrections, accessed January 5, 2024, <https://cdoc.colorado.gov/about/data-and-reports/statistics>.

¹³ "Statistics," Department of Corrections, accessed January 5, 2024, <https://cdoc.colorado.gov/about/data-and-reports/statistics>.

¹⁴ Colorado Division of Criminal Justice Jail Data Dashboard https://tableau.state.co.us/t/CDPS_Ext/views/JailDataDashboard_7/HB19-1297-Jail_Capacity?%20%3Aembed=y&%3AshowAppBanner=false&%3Adisplay_count=no&%3AshowVizHome=no#2.

¹⁵ "DYS Residential Youth Centers," Colorado Department of Human Services, Division of Youth Services, accessed January 5, 2024, <https://cdhs.colorado.gov/our-services/youth-services/dys-residential-youth-centers>.

the CMS requirements. DME and HRSN services will be evaluated and potentially incorporated in a later phase as part of the individual's post-release benefit.

Eligibility should include juvenile population, jails,¹⁶ and prisons. Juvenile and prison populations will be incorporated in the initial phase of the implementation plan. Jail populations will be phased in at the renewal period.

Data there should be investments to enhance health information exchange across agencies and facilities, with clear data standards and outcomes that are continuously monitored. While the development and standardization of the Health Information Exchanges (HIEs) is outside the scope of this waiver benefit directly, Colorado is already implementing these systems and instituting standards.

Technical Assistance carceral facilities will need assistance with encounter-based care, billing, MAT, and change management. Best practices and procedures will be determined, and education provided to all carceral settings.

Interagency Coordination planning and coordination should occur across agencies as the demonstration is developed. HCPF will work with state authorities such as DOC and DYS throughout the development of the implementation plan, assuring all agencies are involved.

Severe Mental Illness Initiative

State Behavioral Health System of Care

The State public BH care system includes substance use and mental health services and is administered and funded primarily by three separate executive branch departments: HCPF, CDHS which houses the BHA, and the Office of Civil and Forensic Mental Health (OCFMH), and the Colorado Department of Public Health and Environment (CDPHE). HCPF serves as the state Medicaid authority, the BHA is the single state authority (SSA) for substance abuse services and the state mental health authority (SMHA), and CDPHE serves as the state public health authority and leads prevention efforts for the state.

Figure 1: Overview of the State's Public BH System Administration

HCPF
<ul style="list-style-type: none">• Medicaid single state agency• Provides primary oversight of Medicaid-funded services• Contracts with MCEs to administer Medicaid benefits, including BH
BHA
<ul style="list-style-type: none">• Designed to be the single entity responsible for driving coordination and collaboration across state agencies to address BH needs• Administers, licenses, and regulates community-based public BH services• Purchases BH services for under/uninsured individuals• Formulates and implements policy governing public BH services
CDPHE
<ul style="list-style-type: none">• State public health authority

¹⁶ Please note that due to the complex nature of the jail structure in the State, additional research is being conducted and jails will be phased into the demonstration at a later date.

- Has primary regulatory oversight and licensing of health facilities, including psychiatric hospitals
- Leads prevention efforts

Managed Care Entities & Behavioral Health Administrative Services Organizations

The State began utilizing managed care over 25 years ago through the establishment of Behavioral Health Organizations responsible for promoting optimized mental health and wellness for all members and ensuring delivery of medically necessary mental health and SUD services. The first iteration of the ACC was established in 2011. Regional Care Coordination Organizations were designed to work alongside the Behavioral Health Organizations by supporting the physical health of members through the development of formal contracted networks of primary care medical homes and informal networks of specialists and ancillary providers.

Beginning in July 2018, Phase II of the ACC established RAEs, which combined the responsibilities of the Regional Care Coordination Organizations and Behavioral Health Organizations under one entity to promote an integrated, whole-person approach to members' physical health and BH. The State also has a MCO that provides both physical health and BH services. Together, seven RAEs and two MCOs are referred to as MCEs. As the core of Health First Colorado (Colorado Medicaid), MCEs:

- **Provide a regionally responsive approach and oversight to care** particularly for members with chronic and complex health care conditions with needs that span multiple agencies and jurisdictions. As regional organizations, MCEs are expected to understand the nuances among populations in the geographic area they cover to create cohesive provider and community support networks that deliver coordinated, whole-person care that improves health outcomes.
- **Administer the Capitated Behavioral Health Benefit** by maintaining a network of providers and providing or arranging for the delivery of medically necessary mental health and SUD services utilizing a community-based continuum of care that adapts to a member's changing needs and provides appropriate access to care.
- **Contract with and support a network of Primary Care Medical Providers (PCMPs)** to serve as medical homes for members, providing whole person, coordinated, and culturally competent care. MCEs also provide training and practice transformation support to providers to ensure the delivery of comprehensive, cost-effective, quality care that improves the member and provider experience.
- **Manage overall administration, data and information, and member access to care and support** by leveraging technology and establishing the infrastructure, tools, and resources that enable the timely and cost-effective delivery of health care services and supports that improve member outcomes.

HCPF is currently contracted with five organizations to provide MCE responsibilities in seven designated regions. Contracts with the MCEs will end on June 30, 2025. HCPF is in the process of designing the next iteration of the ACC, referred to as Phase III, which will begin on July 1, 2025. ACC Phase III is a critical part of HCPF's efforts to improve care quality, service, equity, and affordability. Phase III will incorporate, complement, and expand on policies and programs being implemented by HCPF and other state agencies to advance health care throughout Colorado.

Several ACC Phase III planned initiatives encompass BH services and programming, such as:

- **Improving access to care.** Ensuring members have access to affordable, high-quality care is a key priority. HCPF has supported several initiatives to increase the number of providers that see Health First Colorado members, such as increasing payment rates, providing grant funding to improve rural health care access, leveraging American Rescue Plan Act (ARPA) dollars to increase BH access, and streamlining processes and advancing provider tools to reduce administrative burden.
- **Health equity.** HCPF is dedicated to meeting its mission to improve equity and reduce health disparities. While HCPF is working hard to apply a health equity lens across all programs and initiatives, four initial health disparity areas of focus have been identified, one of which is BH.
- **Home and community-based care.** The ARPA provided HCPF with more than \$550 million of stimulus funds to implement lasting transformation for people with disabilities and long-term care needs. HCPF's 63 ARPA initiatives enhance, expand, and strengthen home and community-based services in the State through the end of 2024. This includes \$138 million in programs that address BH. At the same time, HCPF has been implementing several Case Management Redesign initiatives, including a new care and case management web-based tool.
- **Behavioral Health.** HCPF is partnering with the BHA and all state agencies to transform the State's BH system and in so doing, improve the system for Health First Colorado members. This includes adding new crisis benefits, creating new payment models to increase rates for safety net providers, increasing residential and step-down beds, expanding the provider network, improving transparency and reporting, reducing administrative burden, and catalyzing care coordination.

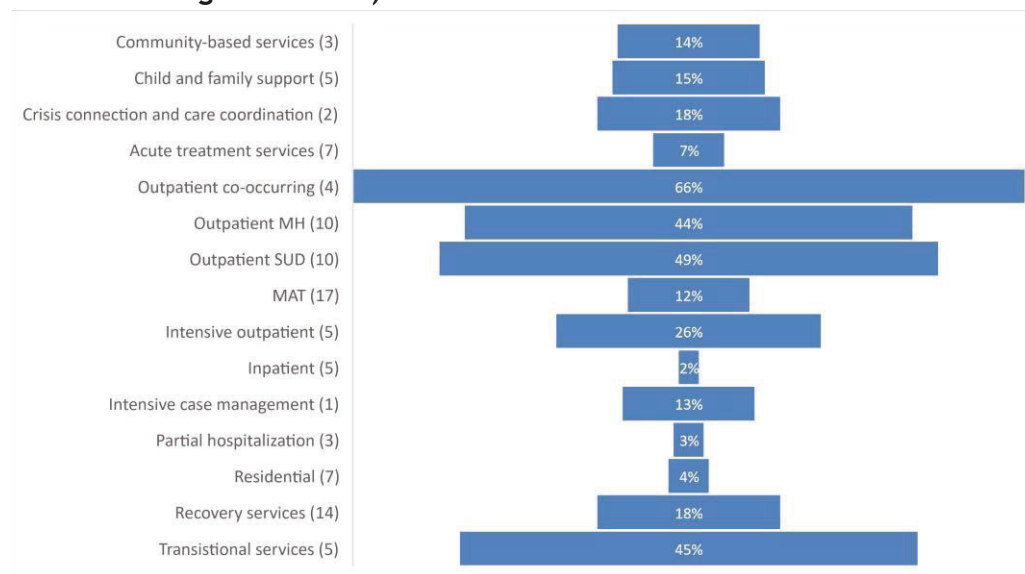
In addition to these Health First Colorado initiatives, the State is in the process of consolidating BH networks for its safety net system into one behavioral health administrative services organization (BHASO) per region. BHASOs are intended to help individuals and families initiate BH care and ensure timely access to services. The BHASOs will be implemented regionally by July 2025 and will consolidate MCO (SUD treatment services), Administrative Service Organizations (crisis services), and services offered by Community Mental Health Centers (CMHCs). The BHASOs will provide a continuum of BH safety net services and care coordination. They will also be expected to interface and align with the MCEs.

Service Continuum

In 2020, the State conducted a Behavioral Health Needs Assessment to assess service gaps and areas for improvement. This included an analysis of the continuum by using Substance Abuse and Mental Health Services Administration (SAMHSA) Locator that has detailed service level data, the BHA Licensing and Designation Database and Electronic Records System data, and a provider survey. Based on the SAMHSA locator data, as illustrated in Figure 2, outpatient mental health and SUD treatment and transitional services are the most comprehensive offerings among BH providers in the State, while the least comprehensive services are available for acute needs like inpatient, partial hospitalization, and residential care. Stakeholders emphasized the need for more specialized and intensive services, particularly mental health transitional services. When examining specific components of transitional

services, discharge planning was identified as the highest need. HCPF seeks to address these identified needs through this Demonstration.

Figure 2: BH Provider Services Profile (Average Percent of Service Types Offered per Provider Along Continuum)



Behavioral Health Provider Designation and Licensing

The BHA is responsible for licensing BH treatment programs and designating mental health treatment programs. In alignment with House Bill 19-1237, House Bill 22-1278, and House Bill 23-1326, BHA updated its licensing structure and process, with new BHA provider rules approved by the State Board of Human Services on November 3, 2023. As of January 1, 2024, BHA has the authority to issue Behavioral Health Entity (BHE) licenses to agencies that qualify as a BHE.

BHE is responsible for the approval of Essential and Comprehensive Providers that elect to participate in the safety net system to ensure all those in the State who need services have access to them.

The authority to issue BHEs transitioned to the BHA from the CDPHE on January 1, 2024, and replaced the existing structure of SUD treatment licenses, and CMHC designations in the State.

The BHE license model provides a “cafeteria-style” license in which an agency holds a single BHE license with different endorsements, allowing the agency to offer various services at multiple locations. This allows flexibility and ultimately will support easier addition of services and locations for the agency to meet the needs of their populations served. This licensing and designation structure transition is expected to continue through the early months of 2025. Endorsements under a BHE license may include:

- Level of Care Endorsements
 - Recovery Supports
 - Outpatient and High Intensity Outpatient Services

- Residential and Overnight Services
- Crisis Endorsements
 - Crisis Services
 - Walk-in Clinic
 - Mobile Crisis
 - Community-Based Respite
 - Acute Treatment Units (ATUs)
 - Crisis Stabilization Units (CSUs)
 - Residential Respite
- Population-Specific Endorsements
 - Emergency and Involuntary Commitment
 - Children and Families
 - Women’s and Maternal BH Treatment
 - Criminal JI Services

¹ The number of services per continuum category included in the analysis are provided in parentheses (#). Source: SAHMSA Locator, March 2020.

Behavioral Health Safety Net Providers

BH safety net providers serve priority populations and comply with the safety net no refusal requirements, ensuring that priority populations receive access to the care and care coordination that they need to achieve whole person health. BH providers can continue to enroll with Health First Colorado and serve Medicaid members without being approved as a BH safety net provider. Seeking approval is voluntary for providers. However, only approved safety net providers are eligible for enhanced reimbursement rates.

Comprehensive Community BH Providers: A Comprehensive Provider is a licensed BH entity or provider approved by the BHA to provide care coordination and the following BH safety net services, either directly or through formal agreements with BH providers in the community or region:

- Emergency and crisis BH services
- Mental health and substance use outpatient services
- BH high-intensity outpatient services
- Care management
- Outreach, education, and engagement services
- Mental health and substance use recovery supports
- Outpatient competency restoration

- Screening, assessment, and diagnosis, including risk assessment, crisis planning, and monitoring to key health indicators

Comprehensive Providers are required to serve all priority population individuals unless the individual requires a level of care the provider does not provide, or the provider does not have the capacity to serve the individual within an appropriate time frame. Prior to changes in the State's BH provider licensing and designations, the public mental health system consisted of 17 contracted CMHCs. Each CMHC received state general funds, mental health block grant funds, and payments from public and private insurers to provide mental health services including Medicaid. All CMHCs have or are expected to transition to comprehensive providers by early 2025.

Essential Behavioral Health Safety Net Provider: An Essential Provider is a licensed BH entity or provider approved by the BHA to provide care coordination and at least one of the following BH safety net services:

- Emergency or crisis BH services
- BH outpatient services
- BH high-intensity outpatient services
- BH residential services
- Withdrawal management services
- BH inpatient services
- Integrated care services
- Hospital alternatives
- Additional services that the BHA determines are necessary in a region or throughout the state

Essential Providers can be approved to serve a subset of priority populations (i.e., a specific age range). Essential Providers must still comply with the no refusal requirements for the subset of priority populations they are approved to serve. Essential Provider approval is not predicated upon a BHE license, unless the provider is otherwise required to hold a BHE license. BH providers that do not require a BHE license can be approved as an Essential Provider by demonstrating that they hold any required licenses, and that those licenses remain in good standing (i.e., individual professional license, CDPHE hospital license).

Independent Provider Network

The State's Independent Provider Network (IPN) includes licensed BH providers, ranging from independent solo practices or individual practice groups. Each IPN may contract for a scope of services they wish to provide to Health First Colorado members up to the level they are licensed to provide. During State Fiscal Year (SFY) 2021, the volume of services provided by the IPN increased by 24 percent.

Crisis Services

After the 2014 Aurora theater shooting, the State implemented a statewide crisis response system, guaranteeing that all Coloradans have access to BH care regardless of ability to pay. The coordinated BH crisis response system improves access to the most appropriate resources and crisis interventions via a statewide hotline, mobile response, and walk-in crisis services across the state and includes the following key service components:

- **Statewide 24-hour crisis help line:** A 24-hour telephone crisis service that is staffed by skilled professionals and peers who can assess crisis situations and make the appropriate referrals to resources and treatment. In July 2022, Colorado launched the new 988 Suicide and Crisis Lifeline alongside the existing state crisis line. As 988 capacity grows, the state crisis line will be integrated with 988.
- **Statewide awareness campaign and communication:** Multi-media campaign, branding, and communication to increase awareness of BH illness and resources. The communication plan includes a website (www.coloradocrisiservices.org), social marketing, billboards, brochures, television, and radio ads.
- **Walk-in crisis services:** Walk-in crisis services with the capacity for immediate clinical intervention, triage, and stabilization. The walk-in crisis services employ an integrated health model based on evidence-based practices that consider an individual's physical and emotional health, are part of a continuum of care, and are linked to mobile crisis services and crisis respite services.
- **Crisis stabilization units:** Facilities, using a restrictive egress alert device, which serve individuals requiring 24-hour intensive BH crisis intervention for up to five days. CSUs employ an integrated health model based on evidence-based practices that consider an individual's physical and emotional health, are a part of a continuum of care, and are linked to mobile crisis services and crisis respite services.
- **Mobile crisis services:** Twenty-four-hour mobile crisis units can respond within one-hour in urban and two-hours in rural areas to a BH crisis in the community for immediate clinical intervention, triage, stabilization, and connection to services. Effective July 1, 2023, the mobile crisis response (MCR) benefit was expanded to adopt standards in alignment with requirements under Section 9813 of the American Rescue Plan Act of 2021 (ARP) (Pub. L. 117-2). These standards support trauma-informed and evidence-based practices with the goal of reducing reliance on criminal justice and EDs for BH needs.
- **Crisis Respite:** Crisis respite services are overnight services provided in a 24-hour facility. Services are designed to improve/maintain the condition and functional level of the member and prevent relapse/hospitalization. Services include assessment, supervision, structure and support, and care coordination. Respite crisis services are linked to the walk-in crisis services. Crisis respite services that include a range of short-term crisis residential services, such as an ATU.
- **Acute Treatment Units:** An ATU is a facility or a distinct part of a facility for short-term psychiatric care, which may include treatment for SUD, that provides a 24-hour therapeutically planned and professionally staffed environment for persons who do not require inpatient hospitalization but need more intense and individual services than are available on an outpatient basis, such as crisis management and stabilization services.

Further, in January 2023, the BHA launched the Crisis Resolution Team Pilot Program (CRT) in 17 counties. The CRT program supports families with youth and young adults who are experiencing BH challenges and would benefit from intensive, short-term (six to eight weeks), in-home services and connection to ongoing support. CRT services are available to state youth and young adults ages zero to 21. Additionally, in response to state legislation (House Bill 22-1283), the BHA is expanding a community-based crisis response system for pregnant and parenting people, children, youth, and families.

Through this Demonstration amendment, HCPF seeks to reimburse for stays in CSUs and ATUs that meet the definition of an IMD.

Inpatient Services

The OCFMH administers and operates two mental health institutes (state hospitals) to provide inpatient hospitalization for individuals with SMI. These hospitals serve:

- Forensic clients with pending criminal charges who require inpatient evaluations of competency to stand trial and inpatient services to restore competency.
- Individuals who have been found not guilty by reason of insanity and require hospitalization.
- Adults and adolescents who are referred for admission by CMHCs, the Department's Division of Youth Services, and other health providers.

Additionally, there are currently seven privately operated adult inpatient psychiatric facilities that meet the definition of an IMD in Colorado. Through this Demonstration, HCPF intends to only reimburse for stays in private IMDs.

Mental Health Transitional Living Homes

Mental Health Transitional Living (MHTL) Homes are part of a new program that will provide an added layer of services within the State BH continuum of care. These homes will be used as a transition to a less restrictive setting for individuals with severe mental health conditions. Clients may stay as long as necessary for stabilization with a goal of successfully reintegrating in the community.

MHTLs provide continued support with social and life skills development, as well as assistance with other daily life activities based on the client's individual needs. By May 2024, it is anticipated 125 MHTL beds will be available.

Services for Children, Youth, and Families

HCPF and BHA ensure a culturally competent and trauma-informed approach in collaboration with state and local child- and youth-serving agencies to provide a comprehensive array of core mental health services for children, youth, and families. In addition, CDHS's Division of Child Welfare provides oversight and monitoring of the quality of child-serving programs and services. Health First Colorado provides a full continuum of mental health services for children and youth, including case management, individual and group therapy, prevention/early intervention services, residential mental health services (psychiatric residential treatment facility (PRTF) and Qualified Residential Treatment Programs (QRTPs)), school-based, and day treatment services, among others. In addition, through the Early and Periodic Screening, Diagnostic and Treatment (EPSDT) program, members aged 20 and under

have access to comprehensive and preventive mental health services through Health First Colorado.

Continuous Eligibility Initiative

Consistent access to health care is critical to prevention, intervention, and ongoing treatment of individuals with physical and BH needs. This waiver amendment proposal by HCPF seeks to improve health outcomes, promote long-term recovery, and reduce overdose deaths by extending member coverage for priority populations. For children ages zero to three, continuous coverage means they have immediate access to services from birth across multiple developmental stages with a consistent and trusted health care provider, uninterrupted by changes in insurance¹⁷. Through regular screenings, providers can detect problems faster in individuals, as well as their caregivers and home environments leading to earlier prevention and intervention efforts. Early adversity, such as home life instability, abuse, or illness can interrupt foundational brain development in the first years of life putting children at greater risk of developing lifelong health problems, including SUDs¹⁸. Continuous coverage ensures children ages zero to three and their caregivers have access to mental health services like the State's Child First home-visiting program, proven to reduce poor BH among the child and caregiver, decrease exposure to traumatic events, and increase access to services¹⁹. Families can receive screenings, therapeutic interventions, care coordination, and develop trusted relationships with a consistent provider which act as protective factors in preventing adverse childhood events, substance misuse and other negative outcomes for children as they grow²⁰.

Continuous and immediate access to reliable health care is critical to individuals upon release from a correctional facility when they are at highest risk of recidivism, illness, overdose, and death. Individuals leaving adult and youth correctional facilities may only receive timely services if they are quickly connected to health care services, which is why the State seeks to improve pre-release services to ensure that eligible individuals are already connected to the community-based support they need prior to release. Continuous coverage for eligible individuals guarantees health care access for 12 months after release which may lead to outcomes including reducing the likelihood of initiating or returning to substance use. For individuals with SMI or SED who may need additional support in an IMD acute or residential stay, expanding reimbursement opportunities can improve quality and access to these services. This amendment to the State's current 1115 "Expanding the Substance Use Disorder Continuum of Care" Waiver for children, youth, and adults promotes access to health care as a core component of substance misuse prevention, reducing hospitalization and incarceration, and prioritizing physical and BH promotion in the State.

¹⁷Cohen, S. (2021) *Three Principles to Improve Outcomes for Children and Families, 2021 Update*. Center on the Developing Child at Harvard University. Retrieved From: https://harvardcenter.wpenpowered.com/wp-content/uploads/2017/10/3Principles_Update2021v2.pdf

¹⁸Ali N., Borgman, R., Costello, E., Cruz K., Govindu, M., Roberts M., Rooks-Peck, C., Wisdom, A., Herwehe, J., McMullen, T. (2022) *Overdose Data to Action Case Studies: Adverse Childhood Experiences*. National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, U.S. Department of Health and Human Services. Retrieved from: <https://www.cdc.gov/drugoverdose/od2a/pdf/OD2A-ACEs-case-study-508.pdf>

¹⁹Crusto, C.A. Lowell, D.I., Paulicin, B., Reynolds, J., Feinn, R., Friedman, S. R., & Kaufman, J. S. (2008) *Evaluation of a Wraparound Process for Children Exposed to Family Violence*. Best Practices in Mental Health: An International Journal, 4(1), 1-18

²⁰Child First (2023) *Home-Based Intervention*. Child First. Retrieved from: <https://www.childfirst.org/our-work/home-based-intervention>

Goals and Objectives

Re-entry Initiative

Under Section 1115 of the Social Security Act, states may implement “experimental, pilot or Demonstration projects which, in the judgment of the Secretary [of Health and Human Services] are likely to assist in promoting the objectives of [Medicaid].” The State believes this Demonstration is likely to promote the objectives of Medicaid by providing transitional services to ensure high-risk Justice-Involved (JI) populations have critical coverage and supports in place when released from incarceration. Colorado plans to request approval to waive the federal inmate exclusion policy for state operated facilities (DOC and DYS), and will develop a. A comprehensive plan for including jails next year. Any adjustments will be amended in the waiver as part of the renewal process.

Colorado’s proposal is consistent with the CMS goals as outlined in the April 17, 2023, SMD letter. Under this Demonstration, the State will be able to bridge relationships between community-based Medicaid providers carceral staff and incarcerated individuals prior to release, thereby improving the chances individuals with a history of SUD, serious mental illness (SMI), and/or chronic diseases receive stable and continuous care. To successfully design and implement the Re-entry Initiative, Colorado agrees to the required deliverables and milestones CMS has put forward via recent guidance.

The State will submit a Re-entry Demonstration Initiative implementation plan using the most recent CMS guidance to describe its approach to implementing the Re-entry Demonstration Initiative, including timelines for meeting critical implementation stages or milestones, as applicable, to support successful implementation. The State will submit the draft implementation plan to CMS for review no later than 120 calendar days after approval of the Re-entry Demonstration Initiative.

In the implementation plan, the State will provide additional details regarding the implementation of the Re-entry Demonstration Initiative that are not already captured in the Special Terms and Conditions (STCs). Contingent upon CMS’s approval of the State’s implementation plan, the State may begin claiming Federal Financial Participation (FFP) for services provided through the Re-entry Demonstration Initiative at the time of inclusion of the STCs, expected to begin on or after July 1, 2024.

The implementation plan will describe the implementation settings, the time period that pre-release services are available, and the phase-in approach to implementation, as applicable. Other than providing such contextual information, the core requirement of the implementation plan is for the State to describe the specific processes, including timelines and programmatic content where applicable, for meeting the milestones below, such as to remain on track to achieve the key goals and objectives of the program. For each milestone – and specifically for any associated actions that are integral aspects for attaining the milestone – the implementation plan will document the current state of affairs, the intended end state to meet the milestone, the date by which the milestone is expected to be achieved, and the activities that will be executed by that date for the milestone to be achieved.

Furthermore, for each milestone, the implementation plan will identify the main anticipated implementation challenges and the State's specific plans to address these challenges. The implementation plan will document the State's strategies to drive positive changes in healthcare quality for all beneficiaries, thereby reducing disparities and improving health equity. The following describes the overall State commitment to meeting each milestone with a summary of the current state and future strategies for addressing the required milestones:

Milestone 1: Increasing coverage and ensuring continuity of coverage for individuals who are incarcerated.

The State will establish processes to allow and assist all individuals who are incarcerated at a participating facility to access and complete a Medicaid application including providing information about where to complete the Medicaid application for another state and will ensure make available a Medicaid identification number or card to an individual upon release. Colorado will ensure that any Medicaid-eligible person, who is incarcerated at a participating facility but not yet enrolled, is afforded the opportunity to apply for Medicaid and is offered assistance with the Medicaid application process. Colorado will also ensure that all individuals at a participating facility who were enrolled in Medicaid prior to their incarceration are offered assistance with the Medicaid renewal or redetermination process requirements. The current status and future strategies related to this milestone include:

- Colorado has no formal policy outside of best practice and operational memos directing both Department of Correction (DOC) and county eligibility staff to suspend full Medicaid benefits for the incarcerated population who are actively enrolled in Medicaid. This is a manual process between DOC staff and the county eligibility staff. The local Department of Human Services or Medicaid Assistance site will manually move incarcerated Medicaid-enrolled individuals onto a limited benefits plan (Incarceration Benefit, or INCAR), which only allows access to inpatient hospitalization for 24 hours or more. Current practice allows full Medicaid benefit reinstatement at the time of release from the carceral setting. For the incarcerated status to be updated, the member or authorized representative must inform the county Department of Human Services of a setting change.
 - HCPF will work with State partners to establish standard policies and procedures to ensure all active Medicaid members' benefits transition to incarcerated benefits during incarceration and upon release will transition back to full Medicaid benefits.
 - Policies and procedures will also be strengthened to ensure a standardized approach to Medicaid suspension upon incarceration.
- In prisons, State policy states that incarcerated individuals or their representatives may submit applications for Health First Colorado (Colorado's Medicaid program) at any time during incarceration. Individuals entering prison sign a paper consent form to release information, and facility staff enter it into an electronic internal storage system. Forty days before release, if the individual has consented, the facility staff reviews Medicaid status online and works with a contracted vendor to determine Medicaid eligibility. In juvenile facilities, case managers assist individuals with submitting paperwork if the individual asks the facility case manager. Case managers do not review benefit status unless requested by an individual or family.
 - HCPF will work with State authorities over carceral facilities (such as DOC and Division of Youth Services (DYS)) to develop a consistent and efficient process for managing consent and authorization for Medicaid eligibility determinations, including evaluating

staffing, training, and technology needs. HCPF will expand its functionality of existing enrollment technology to allow DOC and DYS staff to support enrolling Medicaid-eligible members in a consistent and timely fashion.

- In prisons, the prison staff reviews eligibility status approximately 40 days prior to release. The prison case manager only assists with the application process, not the redetermination process. In juvenile facilities, DYS does not review Medicaid status for individuals entering the facility. Individuals must address Medicaid renewals upon release through their county of residence.
 - HCPF will work with State authorities over carceral facilities (such as DOC and DYS) to develop a consistent and efficient process for managing consent and authorization for eligibility determination and enrollment prior to release. This will include an evaluation of staffing, training, and technology needs.
- There is no State requirement for DOC or DYS facilities to provide access to enrollment documentation and information on using Medicaid coverage. DOC facility staff provide a copy of Medicaid cards to individuals exiting prison facilities; however, this is not a current requirement.
 - The State will create statewide requirements, including required components of the release package. HCPF will work with State partners at DOC and DYS to establish guidance on adherence to the requirements.
- Facility staff assist individuals with the application process for Medicaid benefits. This is a standardized process to apply to State Medicaid programs only; there is no standard process for supporting access to Medicaid applications in another state at the time of release.
 - HCPF will work with State authorities over carceral facilities to create processes and best practices for each entity, including screening, assisting with recertifying benefits, connecting to out-of-state Medicaid resources, and applying standardized tracking metrics.

Milestone 2: Covering and ensuring access to the expected minimum set of pre-release services for individuals who are incarcerated, to improve care transitions upon return to the community.

Colorado will provide access for individuals to the minimum short-term, pre-release benefit package, including:

- Case management to assess and address identified physical and behavioral health needs and health-related social needs (HRSN);
- MAT services for all types of SUD as clinically appropriate with accompanying counseling; and
- A 30-day supply of medication (as clinically appropriate based on the medication dispensed and the indication) provided to the beneficiary immediately upon release.

Under the demonstration, the State's Managed Care Entities (MCE's) will be required to provide post-release case management transition services. Today, the Colorado prison health care delivery system provides physical health, mental health, dental, vision, and

pharmaceutical services. A third-party contractor typically manages acute or emergency services delivered outside the prison. The 15 youth corrections facilities provide on-site health care and contract with outside providers to provide the care.

In the implementation plan, Colorado will describe how it will implement processes to assure that all pre-release service providers, as appropriate for the provider type, have the necessary experience and training, and case managers have knowledge of (or means to obtain information about) community-based providers in the communities where individuals will be returning upon release. Further, as applicable, the State will establish state requirements for carceral health providers who are not participating in Medicaid or Children's Health Insurance Program (CHIP) that are similar to Medicaid provider standards, as well as program integrity standards to ensure appropriate billing. The current status and future strategies related to this milestone include:

- Per federal requirements to be waived via this Amendment request, pre-release services for prisons are coordinated outside of the Medicaid program. DOC facility case managers identify Medicaid enrolled individuals to receive support through Managed Care Entities (MCEs) upon re-entry beginning forty days prior to exit and securely email the receiving MCE. DOC shares a roster with HCPF to share with MCEs with members who have been released or anticipate being released and assigned to their MCE. The roster contains summary physical health and behavioral health information, which is distributed daily, and is used by MCEs to manage outreach. Juvenile facilities currently have no comparable processes.
 - All individuals released from prisons and juvenile facilities will be eligible for pre-release services under the Demonstration. Current processes for prisons will be coordinated via the Demonstration and consistent with the STCs and CMS guidelines. Processes for juvenile facilities will be developed and implemented in a comparable manner, also consistent with upcoming State plan and EPSDT requirements.
- Clinical providers in the prison staff provides MAT medication, including long-acting injectables, close to release from prison. DOC staff do not provide additional MAT medication for after release. Individuals receive the MAT provider's information at the time of release, and prison MAT case managers make any appointments needed for continued MAT services post-release. Juvenile facility staff screen youth and plan pre-release services at the time of entry. At exit, youth are referred to community resources to address physical health, behavioral health, and health-related social needs. DYS facilities offer no other pre-release services on a standard basis.
 - Develop and implement a state-wide system, including updating eligibility, for managing an individual's behavioral health, physical health, care coordination, and referrals among professionals during pre and post-release periods. Allow MCEs or their contracted providers to perform in-reach activities for pre-release individuals to assure continuity during the re-entry period. Develop and implement a pre-release benefit package that meets the demonstration criteria. The available Medicaid benefits package for incarcerated individuals will be updated to reflect the newly reimbursable re-entry services.
- In prisons, MCE care coordinators work directly with providers in their regions and coordinate with other MCEs when inter-region referrals are needed. HCPF monitors MCEs on their effectiveness in this coordination. MCEs connect high-acuity individuals released

from DOC to community-based providers. In juvenile facilities, facility staff assign the youth a case manager upon entry into detention, and the case manager becomes the parole officer at the time of exit. At exit, staff offer youth community resources and support related to HSRN.

- The MCE's will contract with pre-release case management to ensure warm linkages to community providers and coordinated transition back into the community, according to STC requirements and federal guidance.

Milestone 3: Promoting continuity of care.

In the implementation plan, the State will detail the operational steps and timeline to provide or facilitate timely access to post-release medical supplies, equipment, medication, additional exams, or other post-release services to address the physical and behavioral health care needs identified during the case management assessment and the development of the person-centered care plan. Colorado will outline its processes for promoting and ensuring collaboration between case managers, providers of pre-release services and providers of post-release services, to ensure that appropriate care coordination is taking place. The current status and future strategies related to this milestone include:

- In the current prison system, there are no State requirements for incarcerated adults to receive a care plan before exiting prison. Adult inmates receive education and instructions for physical or mental health needs provided by prison medical staff. Facility staff review medications prescribed for individual conditions at exit and provide thirty days of prescription medication for physical and medical conditions. All infectious disease medication, regardless of amount, is provided at the time of exit. The prison MAT case manager completes MAT medication and care coordination referrals but does not provide MAT medication at the time of exit from the prison setting. Youth detention centers offer limited case management. Youth are assigned a case manager upon entry into the facility. The case manager remains with the individual post-release, serving as the parole officer upon release. The case manager coordinates medical appointments with family or another designee upon release for physical health needs only. Mental health, SUD, or MAT services are not provided via the facility contractor as part of case management for youth transitioning from the detention facility. Case managers connect youth with local mental health services where care is offered outside of the Medicaid program on a sliding scale.
 - HCPF will establish MCE contract expectations to ensure each individual exits their facility of incarceration with an appropriate care plan. The care plan will identify needs and facilitate connections for members with appropriate community-based resources through targeted case management. HCPF will work in conjunction with OCL to establish connections for evaluation for HCBS and long-term services and supports (LTSS) needs. HCPF will provide guidance on the information exchange needed to establish LTSS. Additionally, coordination and connections will be made within the network of Medicaid-enrolled community providers to ensure continuity of care upon release.
- For individuals released from prisons, MCEs provide post-release connections and timely access to services to care for high-acuity individuals identified by DOC as part of the contract requirements. The State has contracted with the MCE's and has outlined expectations for performance measures for individuals exiting carceral settings. For

youth, the detention center case manager coordinates medical appointments with family or designee upon release for physical health needs only. Case management offers mental health, SUD, or MAT services for youth as part of the transition plan from detention facilities utilizing contracted facility providers. Youth leave carceral settings with whatever is left of their current prescription and prescription to refill.

- HCPF will set the standards for MCE case managers as well as define the scope of services included under billable targeted case management. As part of the contract requirements the MCE will be responsible for the timeliness of post-release care coordinators connecting with individuals and executing the care plan.
- For individuals exiting prisons, MCEs are contracted to address coordination with DOC, and a data-sharing agreement is in place to facilitate information sharing for members released from DOC. Individuals typically enter a parole or probation setting upon release, but services for adults transferring to another state remain for the individual to pursue. Standards do not currently exist for what specific relevant health information should be exchanged for continuity of care and care coordination purposes. Youth services are provided based upon assessed need post release not by the MCE but by a parole officer. The parole office provides care coordination information to a contractor provided by the detention services.
 - HCPF will support MCEs with any identified gaps with established data-sharing agreements needed to facilitate the sharing of relevant information. HCPF will update RAE contracts to include language on expectations for appropriate continuity of care and community connections.
- For prisons, the State provides guidance and best practices to outline expectations for the RAE's to connect with community-based providers or warm handoffs for post-release case management. In Juvenile facilities, youth services are not provided immediately upon release through the MCE but rather by a provider contracted by the detention facility. The pre-release case manager and post-release parole officer are the same individual.
 - HCPF will determine policy and procedures for adherence to both new and established processes. HCPF will develop and enforce a process for monitoring and evaluating case management hand-off.

Milestone 4: Connecting to services available post-release to meet the needs of the reentering population.

Colorado has an extensive network of behavioral health and substance use providers and will implement a system to monitor the delivery of post-release services and ensure that such services are delivered within the appropriate time frame. The implementation plan will describe how ongoing post-release case management is monitored and adjusted and describe its process to help ensure the scheduling and receipt of needed services, as well as other services needed to address HRSN and LTSS. Additionally, the implementation plan will describe how the State will ensure that case managers are able to effectively serve Medicaid-eligible individuals under the Demonstration who are transitioning into the community. The current status and future strategies related to this milestone include:

- In the current prison system, information is entered into the state system for individuals exiting prisons that the MCE will review and monitor post-release care. Upon exit, it is up to the individual to meet any post-release requirements for the appointment. The MCE's

have procedures in place to initiate contact with the individual, clarify medical information and coordinate services across various systems of care and social needs. Case managers do not reach out to individuals post-release. The state juvenile facility health IT system (known as “Trails”) will offer some information regarding placement status and services provided. Trails and the state eligibility systems are linked, allowing for members to be tracked using this system integration. The parole officer is the same individual who provides pre-release case management and follows up within 24 hours post-release.

- HCPF will determine the process for monitoring and evaluating case management hand-off and ensure the contracted provider is meeting contracted requirements.
- HCPF will designate an approved state system for storing and sharing individual information, care plan(s), and other relevant information. HCPF will be responsible for determining access for different user types.
- For adult releasees from prison, MCE Care Coordinators have a responsibility to connect members to identified services or appointments. However, there is no process to monitor a care plan. Youth receive follow-up services by the assigned parole officer. The parole officer will provide assessments on a regularly occurring schedule and report to the team on progress toward goals as a condition of parole from the detention center. A limited set of contracted providers offer services, and individuals may decline to work with them. Individuals who decline a provider still need to comply with parole requirements with a different provider chosen by the individual or designee.
 - HCPF will establish expectations for the frequency and timeliness of updates from case managers, including re-evaluations of the care plan.
- For individuals exiting prison, the MCE provider offers connection to HRSN and LTSS. Juvenile facility staff connect contracted providers to the individual as part of the exit plan and parole. Individuals are offered resources for potential HRSN resources for family and youth in order for the youth to be as successful as possible. If needs fall outside the prescribed resources list, the individual must seek out the additional HRSN resources. The contractor will not duplicate care coordination provided through LTSS and HCBS waivers and other programs designed for special populations; rather, the contractor will work to link and organize the different care coordination activities to promote a holistic approach to a member’s care. LTSS is not a part of the review of resources that is made available.
 - HCPF will establish case manager expectations for sharing member information for LTSS and HRSN. Policies and procedures will be developed to ensure warm hand-offs where appropriate, as to not leave it up to the individual to connect to services.
- State facilities have set standards for caseload and capacity as a best practice for case managers in youth and adult carceral facilities. These standards can vary depending on the members’ acuity or level of need. Carceral facilities do monitor this workload.
 - HCPF will collaborate with State partners to review and establish staff capacity expectations to provide effective case management to address timeframes for responses to the specific needs of the individual, expectations, and goals for the transition period, and criteria of levels of need. HCPF will determine monitoring and evaluation mechanisms. The unique needs and challenges related to serving individuals releasing from carceral facilities will be considered when determining provider reimbursement.

Milestone 5: Ensuring cross-system collaboration.

In the implementation plan, Colorado will outline how the state operated facilities will address incarcerated beneficiaries' access to community health care providers, including case managers, either in person or via telehealth. The implementation plan will also outline its plans for establishing communication and engagement between correctional systems, community supervision entities, health care organizations, the State Medicaid agency, and supported employment and housing organizations. Colorado has already developed plans to connect its carceral electronic health records to the Colorado Health Information Exchange. The State will utilize these systems to monitor individuals' health care needs, HRSN, and their access to and receipt of health care services pre- and post-release and identify anticipated challenges and potential solutions. Furthermore, the State will develop and share its strategies to improve awareness about Medicaid coverage and access among stakeholders, including those who are incarcerated. The current status and future strategies related to this milestone include:

- Carceral facilities vary in the provision of pre-release services staff do not provide pre-release services to incarcerated individuals. Carceral facility services are provided based on the availability of contracted providers within the facility.
 - HCPF will work with State partners that oversee carceral facilities to determine and develop metrics for readiness and program goals within correctional facilities. HCPF will determine the technology system needs, including billing, coding, and claims for provided services.
- Organizational engagement and system coordination are currently limited to meetings and conferences. The State does not have an organized plan outlining the communication or coordination structure for addressing services for individuals exiting carceral settings.
 - HCPF will work with state partners to determine representatives from the respective organizations. HCPF will work with stakeholders to determine the timeline for completion of the plan for engagement, coordination of care, and communication across the continuum. HCPF will aid the work group in developing goals and outcomes for each category. HCPF will work with participants to determine the mode of communication for the final plan.
- Education efforts regarding Medicaid coverage, access to services, and awareness of individual needs are limited. The strategies vary across the state. HCPF is carrying out ARPA 8.10 – Criminal Justice Partnerships. This project has engaged key stakeholders from the criminal justice system and Medicaid, including individuals with lived experience, correctional facilities, and providers.
 - HCPF will determine strategies and initiatives to improve awareness and education for individuals exiting the carceral setting as well as providers linked to assist with care coordination. HCPF will determine stakeholders that will participate in developing the awareness and education plan. HCPF will work with participants to determine timelines and implementation of key activities.
- The State has not established or implemented processes to monitor health needs or HRSN for individuals exiting carceral settings.

- HCPF will explore expanding the use of Z Codes for members in carceral settings and establish coding and billing guidelines for case managers to include these details on a member's care plan as well as claims for services.

Re-Entry Reinvestment Plan

HCPF leadership is exploring the current funding landscape with State partners and will develop reinvestment opportunities within the timeline for implementation of the Demonstration. The reinvestment plan will prioritize programs and services that seek to improve health outcomes for the incarcerated population the State is seeking to support via this Demonstration request.

Administrative funds will be claimed to support the implementation of the demonstration focused on education, technical assistance, implementation, and access to the State's Health Information Exchange.

Severe Mental Illness Initiative

State Strategies for Addressing Waiver Milestones

The State has developed a comprehensive strategy to address the milestones associated with this Demonstration, as articulated in State Medicaid Director Letter #18-011. A summary of the State's current status and planned activities associated with each milestone is provided below.

Milestone 1: Ensuring Quality of Care

The State has in place standards and processes to oversee the quality of care rendered by psychiatric hospitals, CSU, and ATUs that will operate under this Demonstration. This includes standards for licensure, monitoring and oversight, and program integrity.

All psychiatric hospitals must be licensed by CDPHE, who is responsible for ensuring psychiatric hospitals maintain ongoing compliance with licensure requirements and is granted authority to conduct both announced and unannounced visits. Additionally, the State has a performance incentive for psychiatric hospitals that demonstrate high performance during re-licensure such as inspection completion with full and timely cooperation and inspection findings with no documented harm or potential harm to clients.

All BHEs are licensed by the BHA, including those with endorsements to operate CSUs and ATUs. As such, the BHA is responsible for ongoing CSU and ATU oversight, including through announced and unannounced site visits. Currently, accreditation is not required for CSUs and ATUs. HCPF will require national accreditations for all BHEs with an ATU or CSU endorsement as a condition of enrollment as a HCPF provider under this Demonstration.

IMDs participating under the Demonstration must be enrolled to participate in Health First Colorado to receive reimbursement. MCEs reimburse IMDs as an "in lieu of" service and are only permitted to contract with Health First Colorado screened and enrolled providers. HCPF provider screening and enrollment processes fully comply with 42 CFR Part 455 Subparts B&E.

Processes are also in place to ensure beneficiaries have access to the appropriate levels and types of BH care and to provide oversight on lengths of stay in inpatient and residential settings. Specifically, MCEs conduct utilization reviews for all stays. MCEs are required to use

the State's medical necessity criteria and utilization management protocols must be based on nationally recognized tools such as InterQual, MCG, or ASAM.

Milestone 2: Improving Care Coordination and Transitioning to Community-Based Care

The State is committed to improving care coordination and transitions to community-based care through this Demonstration. The State has several strategies and initiatives in place to support serving beneficiaries in community-based settings and intends to expand these efforts during the Demonstration. For example, both psychiatric hospitals and MCEs are responsible for pre-discharge planning. Through licensure rules, hospitals are mandated to initiate timely discharge planning, conduct housing need assessments, and connect members with relevant housing resources. MCEs are contractually required to work with the appropriate treatment providers in their region to transition members from hospitals to safe and alternative step-down environments. HCPF also has an incentive plan for MCEs tied to follow-up appointments within seven days of an inpatient discharge for a mental health condition. Several initiatives are also in place to prevent or decrease ED utilization among beneficiaries with SMI or SED prior to admission, such as the aforementioned statewide crisis response system. Additionally, BH safety net providers are also required to meet state-established standards for care coordination, care management, outreach, education, and engagement.

Several BHA programs also provide care coordination. For example, the Momentum/Transition Services Program provides care coordination to assist children and adults discharging from psychiatric hospitals into the community. Care coordination is typically short-term and assists with connection to longer-term supports to reduce cycling back to inpatient care. Supports available through this program include assistance in securing appropriate housing following inpatient discharge. Additionally, while HCPF and the BHA do not fund housing, they coordinate and partner with the Department of Local Affairs, which manages the housing voucher and all other housing programs in support of programming to assist individuals with BH needs.

As part of ACC Phase III, HCPF aims to improve care coordination and case management within the system by enhancing and standardizing the requirements for MCEs. Key components for care coordination in Phase III will be centered around the following objectives:

- Improve the quality, consistency, and measurability of interventions for care coordination and case management.
- Improve the quality, consistency, and measurability of interventions for health improvement program engagement and the availability of system data insights (claim utilization, member demographics, gaps in care, etc.) that connect member needs with appropriate programs and supports.
- Increase member, provider and key partner awareness and understanding of care coordination and case management services, roles, and responsibilities in relation to other parts of the system.
- Increase equitable access to care coordination and case management.

Relative to BH, stakeholders have recommended alignment of care coordination standards with the BHA. This has led to joint development of a tiered approach to care coordination to be implemented in ACC Phase III. This approach will include levels of coordination that range

from short-term supports, condition specific management interventions, and more intensive supports for individuals with more complex or high-risk physical and/or BH conditions.

Additionally, there will be clearer, more explicit requirements within the MCE contracts for transitions of care from acute clinical settings, regardless of tier, with National Council of Quality Assurance Healthcare Effectiveness Data and Information Set measures used for accountability. Creating consistent definitions and expectations will increase accountability for appropriate management of behavioral and physical health by allowing HCPF to use the same metrics to measure the progress of each MCE.

Additionally, as part of ACC Phase III, HCPF intends to implement payment initiatives to further support the availability of care coordination. For example, MCEs will be expected to distribute a portion of their administrative per member per month (PMPM) payments to their PCMP network for collaborating with the MCEs to achieve ACC program goals and for providing delegated care coordination or health improvement program services to members. MCEs will tier their payments to PCMPs based on their capacity to deliver advanced team-based care, such as proactive population health management, health improvement programs, and effective coordination of BH and physical health care. MCEs will also be encouraged to distribute additional payments to community-based organizations and other providers within the health neighborhood to meet members where they are and to address the full range of members' medical and HRSNs.

HCPF has also established an ACC Phase III strategic objective to improve follow-up and engagement in treatment for mental health and SUD by 20 percent and is considering the following incentive payment measures tied to this objective:

- Follow-up after hospitalization for mental illness (seven days)
- Follow-up after ED visit for alcohol and other drug abuse or dependency (seven days)
- Initiation and engagement of SUD treatment

Finally, HCPF will require MCEs to include in their contracts with all IMDs participating in the Demonstration a requirement to follow-up with beneficiaries and community-based providers within 72 hours post discharge.

Milestone 3: Increasing Access to a Continuum of Care

As described above, and reflected in the attached Mental Health Availability Assessment, the State has participated in ongoing, strategic initiatives to increase access to the continuum of BH services. HCPF is committed to continually evolving the capitated BH benefit by either adding new services or improving the MCE contracts and operations to fill gaps in the continuum of care. Gaps can occur for a variety of reasons, including lack of state and/or federal authority to cover a service, provider capacity and availability of certain services, differences in reimbursement models, and MCE processes and procedures. HCPF is working closely with the BHA to identify where critical gaps are occurring within the state network of safety net BH services while identifying the most appropriate potential solutions. As described further below, over the course of the Demonstration, HCPF anticipates implementing payment reforms and administrative activities to reduce barriers to provider participation and increase access across the BH continuum.

As part of ACC Phase III, BH Alternative Payment Models (APM) are being designed in collaboration with the BHA to support the implementation and sustainability of BH safety net

providers throughout the state. For Comprehensive Safety Net Providers that will be accountable for delivering the greatest range of services for members, HCPF has designed a cost-based, prospective payment model. This funding arrangement is designed to ensure that Comprehensive Safety Net Providers can provide the full continuum of community-based services to members, even those services that may not be used frequently but are considered essential treatment models, especially for those diagnosed with SMI. Additionally, the State is working to develop APMs for Essential Safety Net Providers that are licensed to provide a more limited scope of services critical to the statewide BH network compared to Comprehensive Safety Net Providers, but still meet BHA standards and serve priority populations.

HCPF will also leverage the MCEs and the flexibility of the capitated BH benefit to expand the provider network. This will include creating new Health First Colorado provider definitions and types that align with the BHA's new licensing strategies, with an emphasis on those providers that can enhance BH service availability and continuity of care. Most of these new provider definitions and types will be linked to the new payment framework to support the long-term sustainability of the BH safety net.

One particular focus for improvements to the provider network is increasing availability of high intensity outpatient services. These high frequency, community-based, member and family-centered services are designed to engage adults and youth with severe mental health and/or substance use conditions in extended and consistent treatment to prevent unnecessary hospitalizations, developmental challenges, involvement in criminal and juvenile justice systems, and/or institutionalization. HCPF and the MCEs have begun work to improve the availability of high intensity outpatient services utilizing ARPA funding. This includes incentives to expand access to intensive outpatient services, assertive community treatment, multisystemic therapy, community psychiatric supportive treatment, and step-down services for people leaving institutions and corrections. For ACC Phase III, HCPF will partner with the MCEs to develop solutions that fill gaps in the continuum of high intensity outpatient services, to improve transitions between levels of care, and to add care levels that better reflect member needs. Using a combination of strategies that includes new payment models, lessons learned from the ARPA project will be leveraged to implement strategies that support the long-term sustainability of these services. Strategies will be designed to encourage existing providers, particularly those working in traditionally underserved areas, to become Health First Colorado providers, add new services, and expand service availability and quality. The State is also exploring the certified community behavioral health clinic (CCBHC) model and anticipates applying for SAMHSA's CCBHC Planning Grant in 2024.

HCPF is implementing processes to reduce administrative burden faced by providers to allow for more equal participation among different sized practices, especially for independent BH care providers. For example, HCPF is considering strategies to centralize the credentialing process for all BH providers. Currently, providers are credentialed separately by each MCE. In ACC Phase III, providers would be credentialed through a single entity and those credentials would be accepted by each MCE. The goal is to reduce the administrative burden that comes from credentialing with multiple entities to encourage more providers to participate in the ACC.

The Universal Contracting Provisions are another joint project led by the BHA to reduce provider administrative burden and ensure consistency and accountability for BH service delivery. These provisions will define expectations for BH providers and state agencies when contracting for BH services utilizing standardized contract content of expectations for both

providers and MCEs around items such as data collection and reporting, access to care, compliance with BH safety net standards, claims submission, and billing procedures. The Universal Contracting Provisions, overseen by the BHA, will be utilized for any provider that is contracted by the State to provide BH services.

Milestone 4: Earlier Identification & Engagement in Treatment

HCPF is committed to earlier identification of serious mental health conditions and focused efforts to engage individuals in treatment sooner. The State has been engaged in several initiatives to advance the integration of physical and BH care. This includes joining the administrative responsibilities for BH and primary care under the MCEs, participation in the State Innovation Models initiative, and implementation of the Six Short-Term Behavioral Health Benefit.

Under this benefit enrollees can receive short-term BH services provided by licensed BH clinicians working as part of a member's PCMP. This model supports the delivery of early interventions in a convenient location to prevent exacerbation of both medical and behavioral conditions.

Additionally, the State Legislature passed House Bill 22-1302 in May 2022 with the goal of supporting, improving, and expanding integrated BH services in the state. Through distribution of funds allocated by ARPA, HCPF received funding for the expansion of integrated BH services in primary care settings. The legislation earmarked \$31 million toward the task with the majority of funds going directly to providers to expand access to integrated BH services.

As part of ACC Phase III, HCPF is exploring development of a distinct Integrated Care Benefit. This benefit is intended to align and advance the various efforts to encourage integrated care over the years and would fold in the current Six Short-Term Behavioral Health Benefit. HCPF is currently investigating potential ways to allow reimbursement for standard Current Procedural Terminology code sets often used to support integrated care models, such as the Health and Behavioral codes and/or the Collaborative Care Model service codes. Lessons learned and best practices from implementation of House Bill 12-1302 grant funded pilots will be leveraged in development of this new benefit.

Continuous Eligibility Initiative

The State expects to impact thousands of adults and children with the proposed continuous coverage policies. Colorado expects that together, these two proposed waiver amendment requests will eliminate or substantially reduce gaps in coverage (churn) among young children and adults leaving incarceration due to:

- Small or short-term fluctuations in income
- Incomplete renewal applications and other procedural terminations

Preventing this churn will reduce administrative cost and burden for both the State and Medicaid member, and more importantly, preserve access and promote continuity of care, including BH care. A 2015 cost analysis of national data (2005-2010) estimated that the administrative cost of disenrolling and re-enrolling one person in coverage within a year is

between \$400 and \$600, an amount which would likely be higher today.²¹ A detailed description of the background and benefits of the continuous coverage request is found in the overview paper included in Appendix A.

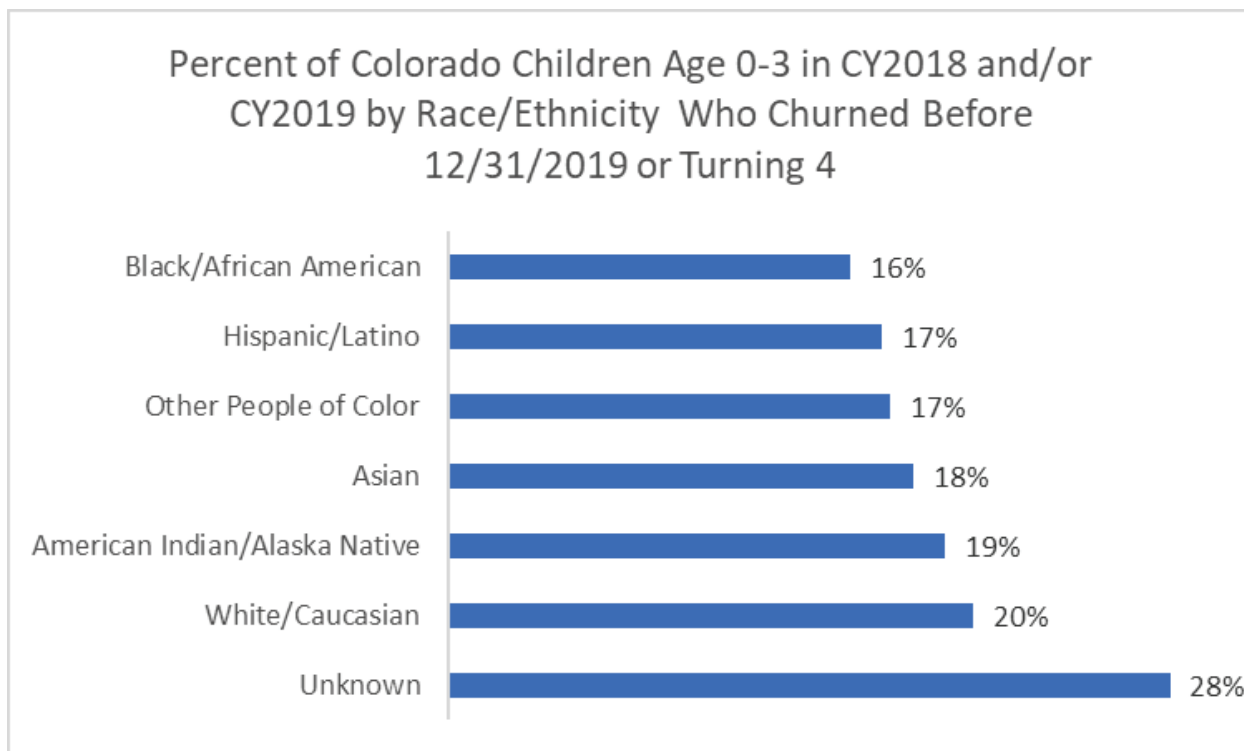
The State is seeking to implement both continuous coverage requests by January 1, 2026. These continuous coverage requests are contingent on the receipt of FFP to the maximum extent allowed under Federal law.

Continuous coverage for children to age three: The State is seeking new federal authority to provide continuous coverage in Medicaid or CHP+ for young children who have incomes below 142 percent Federal Poverty Level (FPL) for Medicaid and 260 percent FPL for CHP+ at the time of application through the end of the month their third birthday falls. A Medicaid or CHIP eligible child shall remain continuously eligible for without regard to changes in family income. The State will act on annual reported family income changes to re-assign children between CHP+ and Medicaid appropriately. Eligibility will continue to be monitored by the State. Children who have moved out of state will not retain coverage. When the family has requested voluntary disenrollment coverage will not be retained.

The State previously adopted the 12-month continuous coverage state plan option for children. While that policy is effective in maintaining coverage during the 12 months between redetermination of Medicaid eligibility, even with a streamlined renewal process, coverage losses at redetermination continue to be an issue for children and families due to change of address, paperwork issues, and other administrative reasons.

An analysis of the State's enrollment data in CY2018 and CY2019 shows that 20 percent of children ages zero to three with eligibility at any time in the two years experienced Medicaid or CHP+ coverage gaps. See the charts below for coverage gaps broken out by race and ethnicity.

²¹ Swartz K., Farley Short P., Roempke Graefe D., Uberoi N. (2015) *Reducing Medicaid Churning: Extending Eligibility For Twelve Months Or To End Of Calendar Year Is Most Effective*. Health Affairs. Retrieved from: <https://www.healthaffairs.org/doi/10.1377/hlthaff.2014.1204>



In September of 2022, Oregon received Federal authority from CMS to provide continuous coverage for Medicaid and CHIP enrolled children from zero to age six, regardless of income. In June 2023, Washington received similar authority for continuous coverage for Medicaid enrolled children from zero to age five. The State seeks the same Federal authority to provide continuous coverage with FFP for Medicaid and CHIP enrolled children from birth to age three.

Adults leaving State correctional facilities: Colorado is seeking new federal authority to provide continuous coverage in Medicaid for adults who have been released from a State DOC facility. A Medicaid-eligible adult shall remain continuously eligible for Medicaid without regard to income for a period of 12 months beginning on the date of release. Eligibility will continue to be monitored by the State. Eligible adults who have moved out of state will not retain coverage. When an adult has requested voluntary disenrollment, the State determines eligibility was erroneously granted, or if the individual is deceased coverage will not be retained.

The State has seen recent improvement in engagement in BH services for adults at re-entry. RAEs, that manage BH services and care coordination for Medicaid members, implemented data sharing agreements in 2019 with DOC and Judicial to better support members as they transition from incarceration to the community. These data connections have resulted in higher engagement in BH services (from 9% to 20%) within 14 days of release. Providing continuous coverage will enhance these important gains.

In September 2022, Massachusetts received Federal authority from CMS to provide 12 months of continuous coverage for Medicaid enrolled adults leaving incarceration. The State seeks the same Federal authority to provide continuous coverage with FFP for Medicaid enrolled adults leaving State correctional facilities.

Section II. Demonstration Eligibility

Re-entry Initiative

Suspension of Coverage. As noted above, in the prison system, there is a manual process for moving eligibility from a full Medicaid benefit package to a limited inpatient benefit package. However, in the youth detention facilities, there is no formal process. Colorado is interested in automating the “suspend” functionality for Medicaid members in DOC. In addition, DOC staff will need to increase their timeframe for review of documents to ensure all eligible members are actively enrolled in Medicaid to access 90 day pre-release benefits. DYS staff will need to implement practices to identify Medicaid-eligible youth to ensure access to 90 day pre-release services status with the additional component of notifying the individual of status.

As is required for JI 1115 Demonstrations, HCPF will work to maintain and enhance eligibility processes to ensure individuals who were enrolled in Medicaid at the time they entered the correctional system can have their coverage quickly and easily reinstated as part of pre-release planning, and ensure that for those who were not enrolled in Medicaid when entering the correctional system, the State will improve its eligibility process for Medicaid coverage applicable to all individuals leaving a prison or jail setting, ensuring that individuals receive assistance with completing and submitting an application for Medicaid, unless the individual declines such assistance or wants to decline enrollment.

If an individual who is incarcerated would be eligible for CHIP if not for their incarceration status, and qualify to receive pre-release services, then pre-release services will be covered under this amendment.

Re-entry Demonstration Initiative populations are defined as persons who are enrolled in Medicaid or who would be eligible for CHIP except for their incarceration status, or who are incarcerated in a State prison or juvenile facility who meet the eligibility criteria below. Like Washington, no specific health condition is required for demonstration eligibility. To receive services under the Re-entry Demonstration, a beneficiary will meet the following qualifying criteria:

- Meet the definition of an inmate of a public institution, as specified in 42 CFR 435.1010, and be incarcerated in a State prison or juvenile facility; and
- Be enrolled in Medicaid or otherwise eligible for CHIP if not for their incarceration status; and
- Identified as expected to be released in the next 90 days and identified for participation in the Demonstration.

Individuals deemed a “qualified inmate” will have eligibility determined for the appropriate Medicaid program for which they meet eligibility requirements. For example, if a “qualified inmate” meets the eligibility criteria for the Adult Expansion Medicaid program, then they would be enrolled in that specific Medicaid program.

A “qualified inmate” must meet general Medicaid program requirements. These include:

1. Must be a Colorado resident

2. Must be a U.S. Citizen or qualified alien²²
3. Must meet the income and asset standards for the applicable Medicaid program

Possible Medicaid programs include, but are not limited to:

1. Temporary Assistance for Needy Families (TANF) or related groups
2. CHIP
3. Aged, Blind or Disabled Medicaid or related groups
4. Adult Expansion Medicaid

The tables below show estimates of the incarcerated population in the State that may be impacted by this Demonstration.

Table 2. Incarcerated Population

Aggregate Releases	Average Daily Population	Annual Releases	Average Length of Stay	Number of Releases estimated to be eligible for Medicaid
Adult Population in 21 State prisons	17,000 ²³	5,883	33 months	4,070-5,295
Youth Population in 15 Youth Corrections Facilities	173 ²⁴	242	19.81 days	126-163

Severe Mental Illness Initiative

All enrollees eligible for a mandatory or optional eligibility group approved for full Medicaid coverage would be eligible for stays in an IMD under the Demonstration. Only the eligibility groups outlined in Table 1 below will not be eligible for stays in an IMD as they receive limited Medicaid benefits only.

Table 1: Eligibility Groups Excluded from the Demonstration

Eligibility Group	Social Security Act and CFR Citations
Limited Services Available to Certain Aliens	42 CFR §435.139
Qualified Medicare Beneficiaries	1902(a)(10)(E)(i) 1905(p)
Specified Low Income Medicare Beneficiaries	1902(a)(10)(E)(iii)

²² Medicaid financings for Non-qualified non-citizens reimburses the Emergency Only program pursuant to 2 CFR § 435.139

²³ Colorado Department of Health Care Policy and Financing, Federal Authority to Support Health-Related Re-entry Services for Incarcerated Populations, October 19, 2023, p. 4.

²⁴ Colorado has a statutory cap on juvenile detention beds. In 2023, the cap was 215. Accessed on 12/18/2023: 2022-2023 Colorado Senate Bill 21-071 Inaugural Analysis Report to Inform Performance Standards and Outcome Measures for Pre-Adjudicated and Adjudicated Youth p. 10.

Eligibility Group	Social Security Act and CFR Citations
Qualified Individual Program	1902(a)(10)(E)(iv)
Qualified Disabled Working Individual Program	1902(a)(10)(E)(ii) 1905(s)
Presumptively Eligible Pregnant Women	1920 42 CFR §435.1103

Continuous Eligibility Initiative

Existing eligibility criteria will continue for each existing program in the SUD waiver.

The populations affected by this amendment request are:

Medicaid and CHP+ enrolled children aged zero to three. The State is seeking to ensure continuous Health First Colorado coverage for children during the first three years of their lives. The State covers Health First Colorado children up to 142 percent FPL with Medicaid funds and up to 260 percent FPL with CHIP funds through the Child Health Plan Plus. The proposed continuous enrollment policy will apply to Medicaid-enrolled children with incomes up to 142 percent FPL, CHP+ children with incomes up to 260 percent FPL, and children who would be eligible for medical assistance coverage but lack a qualifying immigration status. The State estimates that in 2019 there were 43,984 children who lost eligibility or had a gap in eligibility before December 31, 2019, or before they turned 4. The continuous enrollment initiative would have prevented these children from churning off coverage. On average 31,000 young children will receive continuous coverage through this initiative.

Medicaid enrolled adults leaving State DOC. The State is seeking to ensure 12 months continuous Health First Colorado coverage for adults aged 19 to 65 beginning the day they leave a corrections facility. The State covers Health First Colorado adults up to 138% FPL who do not qualify for Medicare. It is estimated that approximately 31,000 Colorado residents are incarcerated in local jails, federal and state prisons, and other criminal justice facilities. As of 2023, there were over 17,000 individuals incarcerated in 21 state prisons. The average stay in state prisons is 33 months, and over 94% of prisoners are male. There are approximately 5,883 releases per year, with 4,070-5,295 of those released are likely eligible for Medicaid.

Existing Eligibility Criteria	Federal Regulation Citation	Income level
Medicaid and CHP+ enrolled children aged zero to three	42 CFR 457.310 42 CFR 435.916	260 FPL
Medicaid enrolled adults aged 19 to 65 leaving State DOC	42 CFR 435.916	138 FPL

Section III. Demonstration Benefits and Cost-Sharing Requirements

Re-entry Initiative

The pre-release services authorized under the Re-entry Demonstration Initiative include the provision or facilitation of pre-release services for a period of up to 90 days immediately prior to the expected date of release, including the facility’s ability to support the delivery of services furnished by providers in the community that are delivered via telehealth. All facilities must implement the three required minimum services listed below. The State may begin claiming FFP for services covered through the initiative, expected to begin on or after July 1, 2024, once the implementation plan is approved by CMS. Cost-sharing requirements will not differ from those provided under the State Plan.

The minimum benefit package for pre-release coverage includes:

- Re-entry transitional case management services to assess and address physical and BH needs and HRSN;
- MAT, for all Food and Drug Administration (FDA)-approved medications, including coverage for counseling; and
- Covered outpatient prescribed medications and over-the-counter drugs (a minimum 30-day supply as clinically appropriate, consistent with the approved Medicaid State Plan) provided to the individual immediately upon release from the correctional facility

The Re-entry Demonstration Initiative implementation plan will describe the implementation settings and the time period that pre-release services are available.

Table 3. Service Definitions for the Re-entry Demonstration Initiative

Covered Service	Definition
Service Level One	
Re-entry Transitional Case Management (RTCM)	<p>RTCM will be provided in the period up to 90 days immediately prior to the expected date of release and is intended to facilitate re-entry planning into the community to:</p> <ul style="list-style-type: none">• Support the coordination of services delivered during the pre-release period and upon re-entry;• Ensure smooth linkages to social services and support; and• Ensure the arrangement of appointments and timely access to appropriate care and pre-release services delivered in the community. Services will include:<ul style="list-style-type: none">— Conducting a health risk assessment, as appropriate;— Assessing the needs of the individual to inform development, with the client, of a discharge/re-entry person-centered care plan, with input from the clinician providing consultation services and the correctional system’s re-entry planning team:

Covered Service	Definition
	<ul style="list-style-type: none"> • While the re-entry transitional person-centered care plan is created in the pre-release period and is part of the case management pre-release service to assess and address physical and BH needs and HRSN identified, the scope of the plan extends beyond release; <ul style="list-style-type: none"> — Obtaining informed consent, when needed, to furnish services and/or to share information with other entities to improve coordination of care; — Providing warm linkages with designated care managers (including potentially a care management provider, for which all individuals eligible for pre-release services will be eligible) upon re-entry. • Ensuring that necessary appointments with physical and BH care providers, including, as relevant to care needs, with BH coordinators and providers, are arranged; • Making warm linkages to community-based services and supports, including, but not limited to educational, social, prevocational, vocational, housing, nutritional, transportation, childcare, child development, and mutual aid support groups; • Providing a warm hand-off, as appropriate, to post-release case managers who will provide services under the Medicaid State Plan or other waiver or Demonstration authority; • Ensuring that, as allowed under federal and state laws and through consent with the beneficiary, data are shared and, as relevant, to physical and BH providers to enable timely and seamless hand-offs; • Conducting follow-up with community-based providers to ensure engagement was made with individual and community-based providers as soon as possible and no later than 30 days from release; and • Conducting follow-up with the individual to ensure engagement with community-based providers, BH services, and other aspects of discharge/re-entry planning, as necessary, no later than 30 days from release.
MAT	<ul style="list-style-type: none"> • MAT for Opioid Use Disorders (OUD) includes all medications approved under section 505 of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 355) and all biological products licensed under section 351 of the Public Health Act (42 U.S.C. 262) to treat OUDs as authorized by the Social Security Act Section 1905(a)(29). • MAT for Alcohol Use Disorders (AUD) and Non-Opioid Substance Use Disorders includes all FDA-approved drugs and services to treat AUD and other SUDs. • Psychosocial services delivered in conjunction with MAT for OUD as covered in the State Plan 1905(a)(29) MAT benefit, and MAT for AUD and Non-Opioid Substance Use Disorders as covered in the State Plan 1905(a)(13) rehabilitation benefit, including assessment; individual/group counseling; patient education; prescribing,

Covered Service	Definition
	<p>administering, dispensing, ordering, monitoring, and/or managing MAT.</p> <p>Services in the correctional system may be provided by professionals/programs that are not Medicaid-certified providers as otherwise required under the State Plan for the provision of the MAT benefit.</p>
Services Provided Upon Release	<p>Services provided upon release include:</p> <ul style="list-style-type: none"> Covered outpatient prescribed medications and over-the-counter drugs (a minimum 30-day supply as clinically appropriate, consistent with approved Medicaid State Plan).

Section IV. Delivery System

Re-entry Initiative

Colorado will deliver non-behavioral health medical services, pharmacy and MAT benefits through the fee-for-service (FFS) delivery system. All other behavioral health services will be delivered through the capitated behavioral health program.

The pre-release services will be provided in the State prisons and juvenile correctional facilities, or outside of the correctional system with appropriate transportation and security oversight provided by the carceral facility, subject to State approval of a facility's readiness, according to the implementation schedule.

Participating practitioners, including licensed, registered, certified, or otherwise appropriately credentialed or recognized practitioners under the State scope of practice statutes, will provide services within their individual scope of practice and, as applicable, receive supervision required under their scope of practice laws. Participating practitioners eligible to deliver services under the Re-entry Demonstration Initiative may be either community-based or correctional-facility-based providers. All participating providers, practitioners, and staff, including carceral practitioners, will have the necessary experience and receive appropriate training, as applicable to a given carceral facility, prior to furnishing Demonstration-covered pre-release services under the Re-entry Demonstration Initiative. Participating providers of re-entry case management services may be community-based or carceral providers who have expertise working with JI individuals who are enrolled in Medicaid.

Severe Mental Illness Initiative

All cost-sharing for services provided through this Demonstration will be consistent with the Medicaid State Plan applicable to a member's specific eligibility category. No modifications are proposed through this amendment.

As previously described, the State operates a capitated managed care structure for the delivery of BH benefits. IMD stays under the Demonstration will be reimbursed by the MCEs and will be considered in the capitation rate setting process.

Through the Demonstration, HCPF will reimburse for clinically appropriate short-term inpatient and residential stays for acute psychiatric care. All services will be subject to medical necessity.

Reimbursement will be limited to the first 15-days of stays that exceed the current limit under “in lieu of authority.”

Continuous Eligibility Initiative

Benefits provided under this amendment request will not differ from those provided under the Medicaid State Plan. Also, the cost-sharing requirements will not differ from those provided under the Medicaid State Plan.

The State is not seeking any changes to the existing Health First Colorado delivery systems. Health First Colorado and CHP+ enrollees will continue to access care through delivery systems defined in the State Plan and other waivers in place. These delivery systems include ACC that has served as the core vehicle for delivering and managing member care in Medicaid, and fully capitated managed care organizations in CHP+. All full-benefit Health First Colorado members are enrolled in the ACC except for members enrolled in the Program for All Inclusive Care for the Elderly. The ACC integrates managed FFS physical health care and managed care for BH through RAEs.

Section V. Implementation and Enrollment in Demonstration

Re-entry Initiative

The State intends to implement the Demonstration with the Department of Correction (DOC) (state prison and jail system) and with the Judicial Branch Court Support Services Division which operates juvenile and community residential centers, as a process is already in place for expedited Medicaid eligibility for individuals discharging from state prison within 90-days of their release date.

Delivery of pre-release services under this Demonstration will be implemented using a phased-in approach, as described below. All participating State prisons and juvenile correctional facilities, must demonstrate readiness, as specified below, prior to participating in this initiative. (FFP will not be available on expenditures for services furnished to qualifying beneficiaries who are incarcerated in a facility before the facility meets the readiness criteria for participation outlined below). Colorado’s juvenile correctional facilities will have the services identified above reimbursed under the Demonstration and an accompanying State Plan Amendment to cover State Plan services for certain JI youth pursuant to the Consolidated Appropriations Act, 2023 by January 1, 2025. HCPF will determine when each applicable facility is ready to participate in the Re-entry Demonstration

Initiative based on a facility-submitted assessment (and appropriate supporting documentation) of the facility's readiness to implement:

1. Pre-release Medicaid and CHIP application and enrollment processes for individuals who are not enrolled in Medicaid or CHIP prior to incarceration and who do not otherwise become enrolled during incarceration;
2. The screening process to determine a beneficiary's qualification for pre-release services;
3. The provision or facilitation of pre-release services for a period of up to 90 days immediately prior to the expected date of release, including the facility's ability to support the delivery of services furnished by providers in the community that are delivered via telehealth. If a facility is not equipped to provide or facilitate the full set of pre-release services, the facility must provide a timeline of when it will be equipped to do so, including concrete steps and its anticipated completion dates that will be necessary to ensure that qualifying beneficiaries are able to receive timely any needed pre-release services;
4. Coordination among partners with a role in furnishing health care, housing, and HRSN services to beneficiaries, including, but not limited to, State agencies and State-contracted providers, as well as administrative services organizations, other BH agencies, and community-based providers, including Federally Qualified Health Centers;
5. Appropriate re-entry planning, pre-release care management, and assistance with care transitions to the community, including connecting beneficiaries to physical and BH providers and the administrative services organizations, and making referrals to care management and community support providers that take place throughout the 90-day pre-release period, and providing beneficiaries with covered outpatient prescribed medications and over-the-counter drugs (a minimum 30-day supply as clinically appropriate, consistent with the approved Medicaid State Plan);
6. Operational approaches related to implementing certain Medicaid and CHIP requirements, including, but not limited to applications, suspensions, notices, fair hearings, reasonable promptness for coverage of services, and any other requirements specific to receipt of pre-release services by qualifying individuals under the Re-entry Demonstration Initiative;
7. A data exchange process to support the care coordination and transition activities;
8. Reporting of requested data from HCPF to support program monitoring, evaluation, and oversight; and
9. A staffing and project management approach for supporting all aspects of the facility's participation in the Re-entry Demonstration Initiative, including information on the qualifications of the providers that the correctional system will partner with for the provision of pre-release services.

Continuous Eligibility Initiative

The State is seeking to implement continuous coverage requests by January 1, 2026, with the assumption that there may be a phased-in approach and a ramp up of continuous enrollment of individuals over the course of the demonstration.

These continuous eligibility requests are contingent on the receipt of FFP to the maximum extent allowed under Federal law.

Section VII. Proposed Waiver and Expenditure Authorities

Re-entry Initiative

The State seeks the following waiver authority as necessary under the Demonstration to receive a federal match on costs not otherwise matchable for services rendered to individuals who are incarcerated 90 days prior to their release. The State also requests the following proposed waivers authority to operate the Demonstration.

Waiver Authority	Reason and use of Waiver Authority will enable the State to:
Statewide Section 1902(a)(1) 42 CFR 431.50	To enable the State to provide pre-release services, as authorized under this Demonstration, to qualifying beneficiaries on a geographically limited basis according to the statewide implementation phase-in plan, in accordance with the Re-entry Demonstration Initiative implementation plan.
Amount, Duration, and Scope of Services and Comparability Section 1902(a)(10)(B) and 1902(a)(17)	To enable the State to provide only a limited set of pre-release services, as specified in these STCs, to qualifying beneficiaries that are different than the services available to all other beneficiaries outside of carceral settings in the same eligibility groups authorized under the State Plan or the Demonstration.
Freedom of Choice Section 1902(a)(23)(A) 42 CFR 431.51	To enable the State to require qualifying beneficiaries to receive pre-release services, as authorized under this Demonstration, through only certain providers.
Requirements for Providers under the Medicaid State Plan Section 1902(a)(27) and 1902(a)(78)	To enable the State to not require carceral providers to enroll in State Medicaid, in order to provide, order, refer, or prescribe pre-release services as authorized under this Demonstration.
Title XXI Requirements Not Applicable to the Title XXI Expenditure Authority Above Requirements for Providers Under the State Plan Section 2107(e)(1)(D)	To enable the State to not require carceral providers to enroll in State CHIP, in order to provide, order, refer, or prescribe pre-release services as authorized under this Demonstration.

Expenditure Authority

The State requests expenditure authority to provide Medicaid benefits to Demonstration eligible individuals.

Title XIX Expenditure Authority	Expenditures
Expenditures Related to Pre-Release Services	Expenditures for pre-release services, as described in these STCs, are provided to qualifying Medicaid beneficiaries and beneficiaries who would be eligible for Medicaid if not for their incarceration status for up to 90 days immediately prior to the expected date of release from a participating State prison or juvenile facility.
Expenditures for Allowable Administrative Costs to Support the Implementation of Pre-Release Services	Expenditures for allowable administrative costs to support the implementation of pre-release services as outlined in the April 17, 2023, SMD letter #23-003 relating to administrative information technology (IT) and transitional, non-service expenditures, including administrative costs under an approved cost allocation plan.

Title XXI Expenditure Authority	Expenditures
Expenditures Related to Pre-Release Services	Expenditures for pre-release services, as described in the STCs, are provided to qualifying Demonstration beneficiaries who would be eligible for CHIP if not for their incarceration status, for up to 90 days immediately prior to the expected date of release from a participating State prison or juvenile facility.

Severe Mental Illness Initiative

The State requests expenditure authority to provide Medicaid benefits to Demonstration eligible individuals.

Title XIX Expenditure Authority	Expenditures
Expenditures Related to IMD services	Expenditures for otherwise covered Medicaid services furnished to otherwise eligible individuals, who are primarily receiving treatment for an SMI/SED who are short-term residents in facilities that meet the definition of an IMD.

Continuous Eligibility Initiative

The State requests expenditure authority to provide Medicaid benefits to Demonstration eligible individuals.

Waiver Authority	Reason and use of Waiver Authority will enable the State to:
<p>Section 1902(a) to the extent it incorporates 42 CFR 435.916</p> <p>42 CFR 457.343</p> <p>Waive redetermination of eligibility regardless of changes in circumstances for children aged zero until age three.</p>	<p>To enable the State to waive the annual redetermination requirements, including required procedures for reporting and acting on changes that would completely disenroll a children aged zero until age three from Medicaid and CHP+ (other than a change in residence to out of state, voluntary disenrollment, erroneously granted enrollment). The State will act on annual reported family income changes to re-assign children between Medicaid and CHP+ appropriately.</p> <p>Continuous enrollment for children at the time of application through the end of the month their third birthday falls.</p>
<p>Section 1902(a) to the extent it incorporates 42 CFR 435.916</p> <p>Waive redetermination of eligibility regardless of changes in circumstances for 12 months prior the release from correctional facilities for adults aged 19 and over.</p>	<p>To enable the State to waive the annual redetermination requirements, including required procedures for reporting and acting on changes to would completely disenroll an adult.</p> <p>12 Month Continuous Eligibility for adults leaving incarceration age 19 and over.</p>

Title XIX Expenditure Authority	Expenditures
Continuous enrollment for children at the time of application through the end of the month their third birthday falls.	Expenditures for continuous enrollment for Medicaid and CHIP children: authority to receive FFP for the continuous enrollment of Medicaid and CHIP children, even if a child's family income exceeds eligibility limits. The State will act on annual reported family income changes to re-assign children between CHP+ and Medicaid appropriately.
12 Month continuous enrollment for adults leaving incarceration age 19 and over.	Expenditures for 12 months of continuous enrollment for adults leaving incarceration aged 19 and over.

Section VI. Demonstration Financing and Budget Neutrality

Budget Neutrality – Caseload and Expenditure Estimates

Refer to Budget Neutrality – Attachment 1 for the State’s historical and projected expenditures for the requested period of the Demonstration.

The State proposes to finance the non-federal share of expenditures under this request using State general funds and existing hospital provider fees approved by CMS that have been in place since 2014 to support the funding of expansion populations. Expenditures under this amendment will be treated as hypothetical or “pass-through” for the purposes of budget neutrality.

The following presents the State, HCPF projected caseload and expenditures. Table 1 presents the current demonstration periods; Table 2 presents the proposed Amendment demonstration periods.

Table 1: Current Demonstration Periods

Demonstration Year	DY1	DY2	DY3	DY4	DY5
Begin Date	1/1/2021	1/1/2022	1/1/2023	1/1/2024	1/1/2025
End Date	12/31/2021	12/31/2022	12/31/2023	12/31/2024	12/31/2025

Table 2: Amendment Demonstration Periods

Demonstration Year	DY5	DY6	DY7	DY8	DY9
Begin Date	1/1/2025	1/1/2026	1/1/2027	1/1/2028	1/1/2029
End Date	12/31/2025	12/31/2026	12/31/2027	12/31/2028	12/31/2029

Table 3 illustrates the demonstration amendment proposals and effective dates. This proposed demonstration amendment will not reduce or negatively impact current Medicaid enrollment. The proposed demonstration amendment will not negatively impact the State’s CHIP Allotment.

Table 3: Demonstration Proposal Effective Dates

Demonstration Proposals	Effective Date
FFP for the first 15 days of care in an IMD for non-substance use disorder for adults between 18 to 64 years old.	July 1, 2025

Demonstration Proposals	Effective Date
	(six-months of DY5)
Re-entry Transitional Case Management, Medication Assisted Treatment, and 30-days medication in hand upon release from a juvenile institution facility or DOC facility.	July 1, 2025 (six-months of DY5)
Allow for an eligible child (under the age of 18) who is less than three years of age to remain continuously eligible for Medicaid or CHP+ without regard to a change in household income until the child reaches three years of age.	January 1, 2026 (DY6)
Continuous coverage for eligible individuals released from a DOC facility for a period of one year beginning on the date of the individual's release.	January 1, 2026 (DY6)

Table 4 presents information by proposed Medicaid Eligibility Group (MEG) for the estimated caseload, (member months), projected per capita and expenditures (total computable) for each proposed amendment. The proposed demonstration will increase the annual enrollment for each of the populations included in the demonstration proposals.

- HCPF makes the following assumptions regarding budget neutrality:
- HCPF proposes a per capita budget neutrality model for the populations covered under the demonstration amendment;
- State administrative costs are not subject to the budget neutrality calculations;
- Since the proposed demonstration amendment expenditures are “hypothetical” there are no projected savings, and the without-waiver and with-waiver per capita amounts are equal;
- Nothing in this demonstration application precludes HCFP from applying for enhanced Medicaid funding as CMS issues new opportunities or policies; and
- The budget neutrality agreement is in terms of total computable so that HCPF is not adversely affected by future changes to federal medical assistance percentages.

Table 4: Caseload and Total Computable Expenditure Projections (Hypothetical Expenditures)

Demonstration Proposal: Federal Financial Participation (FFP) for up to 15 days for non-SUD IMD stays that exceed 15 days - Effective July 1, 2025 (six-months of DY5)

The state does not currently receive FFP for non-SUD IMD stays that exceed 15 days. This demonstration proposal will enable the state to receive FFP for up to 15 days for stays that exceed 15 days. The state will not receive FFP for the portion of non-SUD IMD stays that exceed 15 days. The following table includes the estimated number of member months

(months of eligibility) for each MEG impacted by the demonstration proposal over the five-year demonstration period.

	DY5	DY6	DY7	DY8	DY9
MEG 1 - Non-Expansion Adults					
Demonstration Member Months	3	6	6	6	6
Per Capita (PMPM)	\$39.79	\$41.81	\$43.95	\$46.19	\$48.54
Projected Demonstration Expenditures	\$124	\$263	\$279	\$296	\$315
MEG 2 - Expansion Adults					
Demonstration Member Months	38	78	78	79	80
Per Capita (PMPM)	\$56.82	\$59.72	\$62.76	\$65.97	\$69.33
Projected Demonstration Expenditures	\$2,182	\$4,633	\$4,918	\$5,221	\$5,542
Demonstration Proposal Enrollment, Per Capita and Expenditure Projection Notes: 1) DY5 represents a 12-month period between 1/1/2025 - 12/31/2025; however, IMD services begin 7/1/2025. The DY5 PMPM represents a six-month period. 2) The non-SUD IMD services for up to 15 days will be covered by the behavioral health capitated program. All other services covered via fee-for-service (FFS). The per capita reflects the weighted average of the BH rate impact plus the FFS expenditures in the month the individual is inpatient in a non-SUD IMD.					

Demonstration Proposal: Pre-release Services for Individuals Prior to Release from Juvenile facility or Colorado Department of Corrections - Effective July 1, 2025 (six-months of DY5)

The state does not reimburse for medical services for individuals (juveniles and adults) incarcerated in correctional centers. This demonstration proposal will enable the state to provide a targeted package of services 90-days prior to the individual's release from a juvenile or DOC facility. The following table includes the estimated increase in the number of member months (months of eligibility) for each MEG impacted by the demonstration proposal over the five-year demonstration period. Additionally, this demonstration proposal includes a request for administrative expenditures to support information and technology.

	DY5	DY6	DY7	DY8	DY9
MEG 3 - Justice-Involved Youth					
Demonstration Member Months	79	80	81	82	83
Per Capita (PMPM)	\$896.59	\$942.32	\$990.38	\$1,040.89	\$1,093.97
Projected Demonstration Expenditures	\$70,831	\$75,386	\$80,221	\$85,353	\$90,800
MEG 4 - Non-Expansion Adults					
Demonstration Member Months	276	279	282	285	288
Per Capita (PMPM)	\$886.52	\$931.73	\$979.25	\$1,029.19	\$1,081.68
Projected Demonstration Expenditures	\$244,678	\$259,952	\$276,147	\$293,318	\$311,523

MEG 5 - Expansion Adults					
Demonstration Member Months	7,812	7,890	7,969	8,049	8,129
Per Capita (PMPM)	\$934.30	\$981.95	\$1,032.02	\$1,084.66	\$1,139.98
Projected Demonstration Expenditures	\$7,298,723	\$7,747,550	\$8,224,205	\$8,730,412	\$9,266,861
Administrative Information Technology - Total Computable Aggregate Annual Limits					
Admin/FTE Costs (50% FFP)	\$320,000	\$475,000	\$551,500	\$578,000	\$636,000
Systems Costs (90/10 or 75/25 FFP)	\$550,000	\$110,000	\$27,500	\$27,500	\$27,500
Total Administration Costs	\$870,000	\$585,000	\$579,000	\$605,500	\$663,500
<u>Demonstration Proposal Enrollment, Per Capita and Expenditure Projection Notes:</u>					
1) DY5 represents a 12-month period between 1/1/2025 - 12/31/2025; however, pre-release services begin 7/1/2025. The DY5 PMPM represents a six-month period.					
2) As developed, pre-release services will be provided through fee-for-service.					

Demonstration Proposal: Continuous Eligibility for Children (Under age 18) who are less than 3 years old - Effective January 1, 2026 (DY6)

This demonstration proposal will expand Medicaid eligibility to provide uninterrupted coverage for all children who are less than 3 years old. A non-material number of youth are expected to be in CHIP. The following table includes the estimated number of member months (months of eligibility) for each MEG impacted by the demonstration proposal over the five-year demonstration period.

	DY5	DY6	DY7	DY8	DY9
MEG 6 - Medicaid Children					
Demonstration Member Months	n/a	535,475	540,830	546,238	551,700
Per Capita (PMPM)	n/a	\$317.26	\$333.44	\$350.44	\$368.32
Projected Demonstration Expenditures	n/a	\$169,883,723	\$180,333,270	\$191,425,570	\$203,200,157
<u>Demonstration Proposal Enrollment, Per Capita and Expenditure Projection Notes:</u>					
1) Continuous coverage begins January 1, 2026 (DY6).					

Demonstration Proposal: Continuous Coverage for Eligible Individuals Released from a Department of Corrections (DOC) facility for a period of 1 year beginning on the date of the individual's release - Effective January 1, 2026 (DY6)

This demonstration proposal will expand Medicaid eligibility to provide uninterrupted coverage for a period of one year for Medicaid eligible individuals following release from a juvenile or DOC facility. The populations included in this demonstration proposal include Medicaid children, non-expansion adults, and expansion adults. A non-material number of Medicaid children are expected to be in CHIP. The following table includes the estimated

number of member months (months of eligibility) for each MEG impacted by the demonstration proposal over the five-year demonstration period. Additionally, this demonstration proposal includes a request for administrative expenditures to support information and technology.

	DY5	DY6	DY7	DY8	DY9
MEG 7 - Justice-Involved Youth					
Demonstration Member Months	n/a	302	439	443	448
Per Capita (PMPM)	n/a	\$698.49	\$734.12	\$771.56	\$810.91
Projected Demonstration Expenditures	n/a	\$210,945	\$322,292	\$342,117	\$363,160
MEG 8 - Non-Expansion Adults					
Demonstration Member Months	n/a	762	1,055	1,065	1,076
Per Capita (PMPM)	n/a	\$1,752.55	\$1,841.93	\$1,935.87	\$2,034.60
Projected Demonstration Expenditures	n/a	\$1,335,445	\$1,942,539	\$2,062,025	\$2,188,860
MEG 9 - Expansion Adults					
Demonstration Member Months	n/a	23,368	31,791	32,109	32,430
Per Capita (PMPM)	n/a	\$182.90	\$192.23	\$202.03	\$212.34
Projected Demonstration Expenditures	n/a	\$4,274,080	\$6,111,160	\$6,487,057	\$6,886,076
Administrative Information Technology - Total Computable Aggregate Annual Limits					
Admin/FTE Costs (50% FFP)	\$1,200,000	\$1,386,000	\$1,524,500	\$1,677,000	\$1,845,000
Systems Costs (90/10 or 75/25 FFP)	\$1,100,000	\$220,000	\$55,000	\$55,000	\$55,000
Total Administration Costs	\$2,300,000	\$1,606,000	\$1,579,500	\$1,732,000	\$1,900,000

Impact on Enrollment

The proposed demonstration will impact the annual enrollment for each of the populations included in the demonstration proposals. Enrollment projections are shown through table 4 through estimated number of member months (months of eligibility) for each MEG impacted by the demonstration proposal over the five-year demonstration period.

Capped Hypothetical Administration for Re-Entry

Administrative costs that the State may need to facilitate and support data interoperability between the Medicaid Agency and carceral facilities to support the Medicaid billing and reporting requirements associated with this initiative are separately included in the estimated total computable cost. There are additional funding opportunities under this demonstration initiative to help the State establish IT with participating carceral facilities. This administrative funding will be included in the budget neutrality as a capped hypothetical expenditure and is subject to state share in accordance with federal financial requirements. According to the SMD guidance, CMS is permitting broad flexibility in State identification of IT/infrastructure needs, at enhanced FFP rates (i.e., 90/10 or 75/25) for certain administrative activities. The State is including administrative changes needed to support the provision of demonstration re-entry services. Estimates of potential State administrative needs and associated costs are similar to the CMS approved \$1.85 billion in California and \$300 million in Washington for administrative IT/infrastructure (separate from the costs authorized for the actual re-entry benefit).

MEG	Expenditure Type	Total Spending	Test	DY5	DY6	DY7
MEG 12 JI Non-Services	Total Expenditure	\$300,000,000	Agg. Capped Hypothetical	\$120 million	\$105 million	\$75 million

Overall Budget Neutrality Summary

Member Months under the Amendment*	DY5	DY6	DY7	DY8	DY9
MEG 3 – SMI Non-Expansion Adults	3	6	6	6	6
MEG 4 – SMI Expansion Adults	38	78	78	79	80
MEG 5 – JI Youth	79	80	81	82	83
MEG 6 – JI Non-Expansion Adults	276	279	282	285	288
MEG 7 – JI Expansion Adults	7,812	7,890	7,969	8,049	8,129
MEG 8 – CC Medicaid Children	n/a	535,475	540,830	546,238	551,700
MEG 9 – JI CC Youth	n/a	302	439	443	448
MEG 10 – JI CC Non-Expansion Adults	n/a	762	1,055	1,065	1,076
MEG 11 – JI CC Expansion Adults	n/a	23,368	31,791	32,109	32,430
Total projected member months under the Amendment	8,208	568,240	582,531	588,356	594,240
Projected Services Costs under the Amendment**	DY5	DY6	DY7	DY8	DY9
MEG 3 – SMI Non-Expansion Adults	\$124	\$263	\$279	\$296	\$315
MEG 4 – SMI Expansion Adults	\$2,182	\$4,633	\$4,918	\$5,221	\$5,542
MEG 5 – JI Youth	\$88,430	\$94,117	\$100,153	\$106,560	\$113,361
MEG 6 – JI Non-Expansion Adults	\$308,472	\$327,728	\$348,146	\$369,794	\$392,744
MEG 7 – JI Expansion Adults	\$9,182,426	\$9,747,089	\$10,346,762	\$10,983,615	\$11,658,514
MEG 8 – CC Medicaid Children	n/a	\$169,883,723	\$180,333,270	\$191,425,570	\$203,200,157
MEG 9 – JI CC Youth	n/a	\$210,945	\$322,292	\$342,117	\$363,160
MEG 10 – JI CC Non-Expansion Adults	n/a	\$1,335,445	\$1,942,539	\$2,062,025	\$2,188,860
MEG 11 – JI CC Expansion Adults	n/a	\$4,274,080	\$6,111,160	\$6,487,057	\$6,886,076
MEG 12 – JI Non-Services	\$120,000,000	\$105,000,000	\$75,000,000		
Total Projected Cost	\$129,581,634	\$290,878,023	\$274,509,519	\$211,782,255	\$224,808,729

*Using a 1% caseload growth rate; SMI/SED and Re-Entry Initiative effective July 1, 2025 (six-months of (DY5)); Continuous eligibility effective January 1, 2026 (DY6)

**Using a 5.1% trend rate; SMI/SED and Re-Entry Initiative effective July 1, 2025 (six-months of (DY5)); Continuous eligibility effective January 1, 2026 (DY6)

SMI CHIP Allotment

This requirement is not applicable to this amendment request, as the amendment does not make any changes to the CHIP program.

SMI Maintenance of Effort

In accordance with the November 13, 2018, CMS State Medicaid Director Letter, HCPF understands the IMD Demonstration is subject to a maintenance of effort (MOE) requirement to ensure the authority for more flexible inpatient treatment does not reduce the availability of community-based BH services. Table 3 details the SFY2022-SFY2023 outpatient BH expenditures by delivery system and funding source. Of note, these expenditures do not include adjustments for the SUD risk corridor or medical loss ratio reconciliations. As the exact reconciliation amounts are not yet known, an estimate is also provided in Table 4 based on SFY2021-SFY2022 reconciliations.

Table 3: SFY2022-SFY2023 Outpatient BH Expenditures Without Reconciliations

Item	Total Dollars	Federal Dollars	State Dollars
Medicaid BH Capitations	\$916,440,539	\$659,547,872	\$256,892,667
Medicaid BH FFS	\$21,816,098	\$15,093,440	\$6,722,658
CHP+ Capitations	\$4,201,059	\$2,840,564	\$1,360,495
Total	\$942,457,696	\$677,481,876	\$264,975,820

Table 4: SFY2022-SFY2023 Outpatient BH Expenditures with Estimated Reconciliations

Item	Total Dollars	Federal Dollars	State Dollars
Medicaid BH Capitations	\$830,079,676	\$597,395,314	\$232,684,362
Medicaid BH FFS	\$21,816,098	\$15,093,440	\$6,722,658
CHP+ Capitations	\$4,201,059	\$2,840,564	\$1,360,495
Total	\$856,096,833	\$615,329,318	\$240,767,515

The State is committed to maintaining or improving access to community-based BH services and intends for IMD services to compliment but not replace outpatient services. However, the following caveats are considerations for measuring MOE based strictly on total expenditures:

- Unpredictable State budgets may impact the amount of funding available for services.
- The State may pursue programmatic changes over the course of the Demonstration that may impact expenditures.

- As the State transitions to more value-based reimbursement, costs may decline slightly without any loss of access or quality.

Re-entry Demonstration Initiative Reinvestment

To the extent that the Re-entry Demonstration Initiative covers services that are the responsibility of and were previously provided or paid by the carceral facility or carceral authority with custody of qualifying beneficiaries, the State will reinvest all new federal dollars, equivalent to the amount of FFP projected to be received for such services, as further defined in the Re-entry Demonstration Initiative Reinvestment Plan submitted consistent with the terms and conditions of the Demonstration. The Reinvestment Plan will define the amount of reinvestment required over the term of the Demonstration, based on an assessment of the number of projected expenditures for which reinvestment is required. FFP projected to be expended for new services covered under the Re-entry Demonstration Initiative, defined as services not previously provided or paid by the carceral facility or carceral authority with custody of qualifying beneficiaries before the individual facility implemented the Re-entry Demonstration Initiative (including services that are expanded, augmented, or enhanced to meet the requirements of the Re-entry Demonstration Initiative, with respect to the relevant increase in expenditures, as described in the Re-entry Demonstration Initiative Reinvestment Plan), is not required to be reinvested.

Within 120 days of approval, the State will submit a Re-entry Demonstration Initiative Reinvestment Plan, as part of the required implementation plan for CMS approval, which memorializes the State's reinvestment approach. The Reinvestment Plan will also identify the types of expected reinvestments that will be made over the Demonstration period. Reinvestments in the form of non-federal expenditures totaling the amount of new federal dollars, as described above, will be made throughout the Demonstration period. Allowable reinvestments include, but are not limited to:

- The State share of funding associated with new services covered under the Re-entry Demonstration Initiative;
- Improved access to behavioral and physical community-based health care services and capacity focused on meeting the health care needs and addressing the HRSN of individuals who are incarcerated (including those who are soon-to-be released), those who have recently been released, and those who may be at higher risk of criminal justice involvement, particularly due to untreated BH conditions;
- Improved access to and/or quality of carceral health care services, including by covering new, enhanced, or expanded pre-release services authorized via the Re-entry Demonstration Initiative opportunity;
- Improved health IT and data sharing;
- Increased community-based provider capacity that is particularly attuned to the specific needs of, and able to serve, JI individuals or individuals at risk of justice involvement;
- Expanded or enhanced community-based services and supports, including services and supports to meet the HRSN of the JI population; and
- Any other investments that aim to support re-entry, smooth transitions into the community, divert individuals from incarceration or re-incarceration, or better the health

of the JI population, including investments that are aimed at interventions occurring both prior to and following release from incarceration into the community.

Section VIII. Demonstration Hypotheses and Evaluation

Re-entry Initiative

With the help of the independent evaluator, the State will amend the approved SUD evaluation plan for evaluating the hypotheses indicated below. Colorado will calculate and report all performance measures under the Demonstration. The State will submit the updated SUD evaluation plan to CMS for approval.

The State will conduct ongoing monitoring of this Demonstration related to the five Re-Entry milestones as required in CMS guidance and will provide information regarding monitoring activities in the required quarterly and annual monitoring reports.

By providing Medicaid coverage prior to an individual's release from incarceration, the State will be able to bridge relationships between community-based Medicaid providers and JI populations prior to release, thereby improving the likelihood that individuals with a history of behavioral health conditions and/or chronic diseases will receive stable and continuous care. The following hypotheses and goals will be tested during the approval period:

Hypotheses: The full 90-day timeline will enable the State to support pre-release identification, stabilization, and management of certain serious physical and behavioral health conditions that may respond to ambulatory care and treatment (e.g., diabetes, heart failure, hypertension, schizophrenia, SUDs) which could reduce post-release acute care utilization.

By allowing early interventions to occur in the full 90-day period immediately prior to expected release, such as for certain BH conditions and including stabilizing medications like long-acting injectable antipsychotics and medications for addiction treatment for SUDs, the State expects that it will be able to reduce decompensation, suicide-related deaths, overdoses, and overdose-related deaths in the near-term post-release.

Questions: The State will test, and comprehensively evaluate through robust hypothesis testing, the effectiveness of the extended full 90-day coverage period before the beneficiary's expected date of release on achieving the articulated goals of the initiative:

- Increase coverage, continuity of coverage, and appropriate service uptake through assessment of eligibility and availability of coverage for benefits in carceral settings just prior to release;
- Improve access to services prior to release and improve transitions and continuity of care into the community upon release and during re-entry;

- Improve coordination and communication between correctional systems, Medicaid systems, administrative services organizations, and community-based providers;
- Increase additional investments in health care and related services, aimed at improving the quality of care for beneficiaries in carceral settings and in the community to maximize successful re-entry post-release;
- Improve connections between carceral settings and community services upon release to address physical health, BH, and HRSN;
- Reduce all-cause deaths in the near-term post-release; and
- Reduce the number of ED visits and inpatient hospitalizations among recently released Medicaid beneficiaries through increased receipt of preventive and routine physical and BH care.

Data Source: Claims/encounter data.

Evaluation Design: Independent evaluator will design quantitative and qualitative measures to include quasi-experimental comparisons and interrupted time series analysis.

Severe Mental Illness Initiative

The State's Independent Evaluator will work with CMS to amend the Demonstration evaluation design. Below are proposed hypotheses for this initiative. The specific evaluation methodology will be submitted with the updated Evaluation Design upon approval of the amendment.

Hypothesis	Evaluation Questions	Evaluation Parameters/Methodology
Goal 1: Reduced utilization and lengths of stay in EDs among Medicaid beneficiaries with SMI or SED while awaiting mental health treatment in specialized settings.		
The demonstration will result in reductions in utilization and length of stays in EDs among Medicaid beneficiaries with SMI or SED while awaiting mental health treatment.	<ul style="list-style-type: none"> • Does the demonstration result in reductions in utilization and lengths of stay in EDs among Medicaid beneficiaries with SMI or SED while awaiting mental health treatment in specialized settings? • How does the demonstration effect utilization reduction and lengths of stay in EDs among Medicaid beneficiaries with SMI/SED by geographic area or beneficiary characteristics? • How do demonstration activities contribute to reductions in utilization and lengths of stays in EDs among 	<p>Data Sources:</p> <ul style="list-style-type: none"> • Claims data • Medical or administrative records • Interviews or focus groups <p>Analytic Approach:</p> <ul style="list-style-type: none"> • Difference-in- differences model • Subgroup analyses • Qualitative analysis

Hypothesis	Evaluation Questions	Evaluation Parameters/Methodology
	Medicaid beneficiaries with SMI/SED while awaiting mental health treatment in specialized settings?	
Goal 2: Reduced preventable readmissions to acute care hospitals and residential settings.		
The demonstration will result in reductions in preventable readmissions to acute care hospitals and residential settings.	<ul style="list-style-type: none"> Does the demonstration result in reductions in preventable readmissions to acute care hospitals and residential settings (including short-term inpatient and residential admissions to both IMDs and non-IMD acute care hospitals, critical access hospitals, and residential settings)? How does the demonstration effect preventable readmissions to acute care hospitals and residential settings by geographic area or beneficiary characteristics? How do demonstration activities contribute to reductions in preventable readmissions to acute care hospitals and residential settings? Does the demonstration result in increased screening and intervention for comorbid SUD and physical health conditions during 	<p>Data Sources:</p> <ul style="list-style-type: none"> Claims data Interviews or focus groups Medical records Beneficiary survey <p>Analytic Approach:</p> <ul style="list-style-type: none"> Difference-in- differences models Qualitative analysis Descriptive quantitative analysis

Hypothesis	Evaluation Questions	Evaluation Parameters/Methodology
	acute care psychiatric hospital and residential setting stays and increased treatment for such conditions after discharge?	
Goal 3: Improved availability of crisis stabilization services, including services made available through call centers and mobile crisis units; intensive outpatient services, as well as services provided during acute short-term stays in residential crisis stabilization programs, psychiatric hospitals, and residential treatment settings throughout the State.		
The demonstration will result in improved availability of crisis stabilization services throughout the State.	<ul style="list-style-type: none"> To what extent does the demonstration result in improved availability of crisis outreach and response services (including crisis call centers, mobile crisis units, crisis observation/assessment centers, and coordinated community crisis response teams) throughout the State? To what extent does the demonstration result in improved availability of intensive outpatient services and partial hospitalization? To what extent does the demonstration improve the availability of crisis stabilization services provided during acute short-term stays in each of the following: public and private psychiatric hospitals, residential treatment facilities, general hospital psychiatric units, and community-based settings? 	<p>Data Sources:</p> <ul style="list-style-type: none"> Annual assessments of availability of mental health services Area Health Resources File (AHRF) data National Mental Health Services (NMHSS) survey Administrative data Provider survey <p>Analytic Approach:</p> <ul style="list-style-type: none"> Descriptive quantitative analysis
Goal 4: Improved access to community-based services to address the chronic mental health care needs of beneficiaries with SMI or SED including through increased integration of primary and BH care.		
Access of beneficiaries with SMI/SED to community-based	<ul style="list-style-type: none"> Does the demonstration result in improved access of beneficiaries with SMI/SED to community-based services to 	<p>Data Sources:</p> <ul style="list-style-type: none"> Claims data

Hypothesis	Evaluation Questions	Evaluation Parameters/Methodology
services to address their chronic mental health care needs will improve under the demonstration, including through increased integration of primary and BH care.	<p>address their chronic mental health needs?</p> <ul style="list-style-type: none"> To what extent does the demonstration result in improved availability of specific types of community-based services needed to comprehensively address the chronic needs of beneficiaries with SMI/SED? To what extent does the demonstration result in improved access of SMI/SED beneficiaries to specific types of community-based services that they need? How does the demonstration effect access to community-based services by geographic area or beneficiary characteristics? Does the integration of primary and BH care to address the chronic mental health care needs of beneficiaries with SMI/SED increase under the demonstration? 	<ul style="list-style-type: none"> Annual assessments of availability of mental health services AHRF NMHSS survey Administrative data Uniform Reporting System Child and Adult Core Set Medical records <p>Analytic Approach:</p> <ul style="list-style-type: none"> Descriptive quantitative analysis Chi-squared analysis Difference-in- differences model
Goal 5: Improved care coordination, especially continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities.		
The demonstration will result in improved care coordination, especially continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities.	<ul style="list-style-type: none"> Does the demonstration result in improved care coordination for beneficiaries with SMI/SED? Does the demonstration result in improved continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities? Does the demonstration result in improved discharge planning and outcomes regarding housing for beneficiaries who are 	<p>Data Sources:</p> <ul style="list-style-type: none"> Claims data Child and Adult Core Set Inpatient Psychiatric Facility Quality Reporting program Medical records Interviews or focus groups Facility records <p>Analytic Approach:</p> <ul style="list-style-type: none"> Difference-in- differences model Descriptive quantitative analysis

Hypothesis	Evaluation Questions	Evaluation Parameters/Methodology
	transitioning out of acute psychiatric care in hospitals and residential treatment facilities? <ul style="list-style-type: none"> How do demonstration activities contribute to improved continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities? 	<ul style="list-style-type: none"> Qualitative analysis

In addition to the independent evaluation, HCPF will provide quarterly and annual reporting specific to this amendment and in accordance with a CMS-approved Monitoring Protocol to be submitted following approval.

Continuous Eligibility Initiative

The State's Independent Evaluator will work with CMS to amend the Demonstration evaluation design. Below are proposed hypotheses for this initiative. The specific evaluation methodology will be submitted with the updated Evaluation Design upon approval of the amendment.

Population: Children zero to age three continuously enrolled in Medicaid and CHP+

Hypothesis	Evaluation Questions	Evaluation Parameters/Methodology
Goal 1: Ensure continuous Medicaid and CHP+ coverage for young children		
Continuous coverage will reduce churn and gaps in coverage for young children enrolled in Medicaid	Does continuous enrollment reduce gaps in coverage?	Examine Medicaid and CHP+ enrollment data by age to determine changes in insured rates and gaps in coverage over time.
Goal 2: Promote longer-term access to and continuity of physical health, BH, and dental care, and preventive services.		
Continuous coverage will increase preventive care utilization, primary care utilization and dental care visits.	Does continuous coverage improve utilization of preventive care and well child visits?	Analyze administrative claims data to determine changes in preventive care, well child visits, primary care visits.

Hypothesis	Evaluation Questions	Evaluation Parameters/Methodology
Goal 3: Combat racial inequities.		
Continuous coverage will reduce churn and gaps in coverage for young children enrolled in Medicaid, including for racial and ethnic groups that experience disproportionately high rates of churn.	Does continuous enrollment reduce gaps in coverage for all racial and ethnic groups?	Examine Medicaid and CHP+ enrollment data by race and ethnicity to determine gaps in coverage over time.
Goal 4: Improve health outcomes and well-being for low-income young children.		
Coverage with fewer gaps in coverage for young children will result in improved health outcomes and well-being.	Does continuous coverage improve health outcomes and well-being?	Measures will be selected from the list of measures that HCPF is calculating as part of the development of our quality metrics program.

Population: Medicaid enrolled adults leaving a correctional facility

Hypothesis	Evaluation Questions	Evaluation Parameters/Methodology
Goal 1: Ensure 12 months of continuous Medicaid coverage for adults leaving a DOC facility.		
Continuous coverage will reduce gaps in coverage for adults leaving a correctional facility.	Does 12 months of continuous enrollment reduce gaps in coverage?	Examine Medicaid enrollment data by age to determine changes in insured rates and gaps in coverage over time.
Goal 2: Promote longer-term access to and continuity of physical and BH care and care coordination.		
Continuous coverage will increase preventive, primary care, and BH engagement.	Does continuous coverage increase primary care and preventive service utilization and BH service utilization?	Measures will be selected from the list of measures the HCPF is calculating as part of the development of a Providers of Distinction quality metrics program.
Goal 3: Combat racial inequities.		
Continuous coverage will reduce churn and gaps in coverage for adults leaving correctional facilities and enrolled in Medicaid, including for racial and ethnic groups.	Does continuous coverage reduce gaps in coverage for all racial and ethnic groups?	Examine Medicaid enrollment data by race and ethnicity to determine gaps in coverage over time.

Hypothesis	Evaluation Questions	Evaluation Parameters/Methodology
Goal 4: Improve short and long-term physical and BH outcomes and reduce recidivism for adults leaving a State DOC facility.		
Continuous coverage will reduce ED visits, hospitalizations, and crisis services.	Does continuous coverage reduce ED visits, hospitalizations, and crisis services?	Analyze administrative claims data to determine changes in preventive care, ED utilization, hospitalizations, crisis service utilization.

Section IX. Compliance with Public Notice and Tribal Consultation

Summary of Public Comments

A summary of feedback from commenters received during the public comment period will be provided in attachment 3 after the public comment period has been completed.

Public Notice Process

Information on the Amendment and a copy of the public notice is available on the HCPF website at this link: <https://hcpf.colorado.gov/1115sudwaiver>. Additional information regarding the public notice process, including public hearings, will be updated after the public comment period has been completed.

Tribal Consultation

The State has two federally recognized tribes, the Southern Ute Tribe and the Mountain Ute Tribe. The State will solicit feedback from both tribes by sending emails to the tribal representatives with a summary of the Demonstration, plus a copy of the public notice, and waiver application (as well as a link to the HCPF website with the relevant documents). This process follows the State's approved tribal consultation State Plan Amendment. Additional information regarding the tribal consultation will be updated after that process has been completed.

Section X. Demonstration Amendment Contact

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Section XI. Appendices

ATTACHMENT 1

- Compliance with Budget Neutrality Requirements

ATTACHMENT 2

- Public Notice Requirements

ATTACHMENT 3

- Public Notice Comments

ATTACHMENT 4

- Tribal Consultation

Nonrulemaking Public Notices and other Miscellaneous Rulemaking Notices

Filed on 01/24/2024

Department

Department of Health Care Policy and Financing

Agency

Medical Services Board (Volume 8; Medical Assistance, Children's Health Plan)



COLORADO

Department of Health Care
Policy & Financing

Notice of Public Comment Process **Medicaid Section 1115 Demonstration Amendment**

Public Comment Period Begins: January 25, 2024 at 8:00 a.m. MST

Public Comment Period Ends: February 24, 2024 at 5:00 p.m. MST

Public notice is hereby given that the State of Colorado's Department of Health Care Policy & Financing (HCPF) is seeking public comments on an amendment to the Expanding the Substance Use Disorder (SUD) Continuum of Care Section 1115 Demonstration (Demonstration). Colorado is requesting an amendment to the Demonstration to authorize:

1. Pre-release services for individuals transitioning from correctional facilities (targeted to begin July 1, 2025);
2. Reimbursement for acute inpatient and residential stays in institutions for mental disease (IMD) for individuals diagnosed with a serious mental illness (SMI) or serious emotional disturbance (SED) (targeted to begin July 1, 2025); and
3. Continuous eligibility for children ages 0-3 and adults leaving a Colorado Department of Corrections (DOC) facility (targeted to begin January 1, 2026).

HCPF is requesting to have an effective date of January 1, 2025 for the proposed amendment to provide the necessary time to implement and operationalize the services and eligibility components within the amendment.

Opportunity for Public Comment

The proposed Section 1115 Demonstration amendment, and a copy of the full public notice, is available for public review and comment at:

[Full Public Notice](#)

[1115 SUD Demonstration Amendment Request](#)

To request a copy of the amendment, please contact HCPF by:

- Sending an email request to hcpf_1115waiver@state.co.us;
- Sending a request by fax to 303-866-4411, Attn: 1115 SUD Demonstration Amendment; or
- Obtaining in person at the Colorado Department of Health Care Policy and Financing, 1570 Grant Street, Denver, CO 80203.

During the public comment period, comments may be sent to hcpf_1115waiver@state.co.us. Public comments may also be submitted by post to:

Director, Health Programs Office

Colorado Department of Health Care Policy and Financing

1570 Grant Street

Denver, Colorado 80203

ATTN: Public Comment - 1115 SUD Demonstration Amendment

Additional information will be posted on HCPF's *Ensuring a Full Continuum of SUD Benefits* webpage, at <https://hcpf.colorado.gov/1115sudwaiver>.

Public Hearings

HCPF invites the public to attend public hearings in person or join by teleconference/webinar to learn more about Colorado's Demonstration amendment and provide comments.

	Public Hearing #1	Public Hearing #2
Date	February 7, 2024	February 8, 2024
Time	3pm-5pm MST	9am-11am MST
Venue	Pueblo City-County Library District - Patrick A. Lucero Branch, 1315 E 7th St, Pueblo, CO 81001 Lucero Large Community Room	Colorado Department of Health Care Policy and Financing 303 E 17th Ave, Denver, CO 80203 Room 11B
Teleconference	833-548-0276	833-548-0276
Webinar	https://us06web.zoom.us/webinar/register/WN_patMQrKgRGcqeXh2tE_Pg	https://us06web.zoom.us/webinar/register/WN_L3Bfl8KSGyxxQm5gY3bdQ

Reasonable accommodations will be provided upon request. Auxiliary aids and services for individuals with disabilities and language services for individuals whose first language is not English may be provided upon request. Please notify 303-866-3438 or the 504/ADA Coordinator at hcpf504ada@state.co.us at least one week prior to the meeting to make arrangements.

CMS/Medicaid Demonstration Website

Relevant webpages and additional information regarding the Medicaid demonstration can be viewed on the CMS/Medicaid website, at: <https://www.medicaid.gov/medicaid/section-1115-demo/index.html>

Summary Description of Proposed Amendment

This abbreviated public notice provides information regarding the proposed amendment request to the Centers for Medicare & Medicaid Services (CMS) for three initiatives: 1) Pre-release services for individuals transitioning from correctional facilities; 2) Reimbursement for acute inpatient and residential stays in institutions for mental disease (IMD) for individuals diagnosed with a serious



mental illness (SMI) or serious emotional disturbance (SED); and 3) Continuous eligibility for children ages 0-3 and adults leaving a Colorado Department of Corrections (DOC) facility.

Re-entry Initiative: The Re-entry Initiative will enable Medicaid coverage and federal financial participation (FFP) using Medicaid and Children’s Health Insurance Program (CHIP) matching funds for adults incarcerated by DOC and youth detained throughout the State receiving a targeted benefit package that would ordinarily not be covered under federal law. This Re-entry Initiative will ensure a continuum of care strategy that enables robust coordination, service provision, and community connections after release.

Colorado is requesting this authority to design and implement a “Re-entry Initiative” that provides:

1. **Medicaid Coverage** for eligible inmates in the State’s correctional system, including all correctional centers (jails and courthouses) and correctional institutions (prisons), juvenile and community residential centers throughout the State. Eligible inmates include those with behavioral health needs including mental health disorders and substance use disorder (SUD), certain other health conditions and incarcerated youth.
2. **A Targeted Benefit Package** for these individuals to include case management services, medication-assisted treatment for SUD, a 30-day supply of medications upon release, and certain other supportive services.
3. **A Coverage Period of up to 90 Days** immediately prior to the release of the incarcerated individual from the correctional system.

Colorado’s specific goals for the Re-entry Initiative are to:

1. Increase coverage, continuity of coverage, and appropriate service uptake through assessment of eligibility and availability of coverage for benefits in carceral settings just prior to release;
2. Improve access to services prior to release and improve transitions and continuity of care into the community upon release and during re-entry;
3. Improve coordination and communication between correctional systems, Medicaid systems, managed care organizations, and community-based providers;
4. Increase additional investments in health care and related services, aimed at improving the quality of care for beneficiaries in carceral settings and in the community to maximize successful re-entry post-release;
5. Improve connections between carceral settings and community services upon release to address physical health, behavioral health, and HRSN;
6. Reduce all-cause deaths in the near-term post-release; and
7. Reduce the number of emergency department ED visits and inpatient hospitalizations among recently incarcerated Medicaid beneficiaries through increased receipt of preventive and routine physical and behavioral health care.



To receive services under the Re-entry Initiative, a beneficiary will need to meet all of the following qualifying criteria:

- Meet the definition of an inmate of a public institution, as specified in 42 CFR 435.1010, and be incarcerated in a State correctional system, including all correctional centers (jails and courthouses) and correctional institutions (prisons), and juvenile and community residential centers; and
- Be enrolled in Medicaid or otherwise eligible for CHIP if not for their incarceration status; and
- Identified as expected to be released in the next 90 days and identified for participation in the Demonstration.

This Re-entry Initiative will not change the underlying Medicaid or CHIP program; in particular, it will not change the current Colorado managed care delivery system, eligibility requirements, covered services, or cost-sharing. This Re-entry Initiative will allow for the provision of certain approved services within carceral settings in the 90 days prior to release, and designate new entities able to coordinate and provide those services. Cost-sharing requirements will not differ from those provided under the State Plan for either Medicaid or CHIP. HCPF will determine when each applicable facility is ready to participate in the Re-entry Initiative based on a facility-submitted assessment (and appropriate supporting documentation) of the facility's readiness to implement.

The pre-release services authorized under the Re-entry Initiative include the provision or facilitation of pre-release services for a period of up to 90 days immediately prior to the expected date of release, including the facility's ability to support the delivery of services furnished by providers in the community that are delivered via telehealth. All facilities must implement service level one with the minimum CMS benefits. Service level one is structured as the CMS-required minimum benefit package for pre-release coverage:

- Re-entry transitional case management services to assess and address physical and behavioral health needs and HRSN;
- MAT, for all Food and Drug Administration approved medications, including coverage for counseling; and
- Covered outpatient prescribed medications and over-the-counter drugs (a minimum 30-day supply as clinically appropriate, consistent with the approved Medicaid State Plan) provided to the individual immediately upon release from the correctional facility.

Administrative FFP will be available for the following activities related to JI infrastructure development for technology, development of business or operational practices, workforce development, outreach, education and stakeholder convening.

Serious mental illness (SMI) and serious emotional disturbance (SED):

Through this amendment, HCPF seeks to expand this authority to reimburse for acute inpatient and residential stays in an IMD for individuals diagnosed with a SMI or SED. This request seeks to:



- Reform HCPF’s current IMD reimbursement policy to cover up to 15 days each calendar month without length of stay restriction, so long as providers maintain an average length of stay of 30 days or less;
- Reduce utilization and lengths of stay in EDs among Medicaid beneficiaries with SMI or SED while awaiting mental health treatment in specialized settings;
- Reduce preventable readmissions to acute care hospitals and residential settings;
- Improve availability of crisis stabilization services including services made available through call centers and mobile crisis units, intensive outpatient services, as well as services provided during acute short-term stays in residential crisis stabilization programs, psychiatric hospitals, and residential treatment settings throughout the state;
- Improve access to community-based services to address the chronic mental health care needs of beneficiaries with SMI or SED including through increased integration of primary and behavioral health care; and
- Improve care coordination, especially continuity of care in the community following episodes of acute care in hospitals and residential treatment facilities.

CMS provides two options for states to receive FFP for short-term IMD stays. First, states may use “in lieu of authority” through its managed care contracts to reimburse IMD stays of up to 15 days in a calendar month. Second, under 1115 waiver authority, states may reimburse for IMD stays of up to 60 days if an average statewide length of stay of 30 days or less is maintained. Currently, Colorado utilizes “in lieu of” authority through its managed care contracts with RAEs to provide IMD reimbursement for stays of up to 15 days in a calendar month. This authority provides sufficient coverage for most acute psychiatric inpatient stays. However, there remain IMD stays that exceed the 15-day limit due to issues such as patient acuity and additional time needed to ensure a safe and appropriate transition to community-based services. Stays that exceed the 15-day LOS rule are not eligible for any reimbursement for services rendered.

Through this amendment, HCPF seeks authority to reimburse up to 15-days each calendar month even if a stay exceeds the current limit under “in lieu of authority.” This will permit Colorado to modify its current practice through which a prorated capitation payment is made to the RAE for the days within the month that the enrollee was not in an IMD and the RAE’s subsequent payment recoupment from the IMD for the entire stay. It will also address the clinical decision making challenges in which providers are choosing between discharging a patient and receiving 15 days of reimbursement, and recognizing that some clients may have extended LOS due to discharge barriers such as housing, transportation, access to step down or psychiatric care, or physical safety in the home.

Continuous Eligibility:

Colorado House Bill 23-1300 authorizes HCPF, by April 1, 2024, to seek federal authority to provide continuous Medicaid coverage for children up to age three and for twelve months for adults who have been released from a Colorado Department of Corrections facility, regardless of any change in



income during that time by January 1, 2026.¹ Through this legislation, Colorado aims to improve the health and well-being of people in Colorado through consistent access to health care coverage during critical periods in life. During the COVID-19 public health emergency, longer periods of continuous coverage in the state's medical assistance programs allowed more Colorado families to access and maintain health insurance. This continuous coverage reduces family stress, increases the use of preventive services, and reduces costly, avoidable emergency department (ED) visits and hospitalization stays. Continuous coverage assists children in healthy early development and strengthens overall mental health through regular connections with the health system.

Providing continuous Medicaid coverage can decrease gaps in insurance coverage (churn: losing and then re-enrolling in coverage often for administrative reasons or small fluctuations in income) and enhance the continuity of care and delivery of physical and behavioral health services during early childhood and when adults experience the difficult transition of leaving the criminal justice system.

This demonstration request will end churn among Medicaid and CHP+² enrolled children through age three, enabling their families and providers to better address their primary and preventive health care needs.³ Children need consistent access to health care, especially in their early years, when frequent screenings, vaccinations, and wellness checkups are critical to their development and school readiness. This request will ensure that coverage disruptions do not prevent children from receiving ongoing treatment and services they require during the critical early years of development and growth. This request seeks to:

- Ensure continuous Medicaid and CHP+ coverage for young children;
- Promote longer-term access to and continuity of physical health care, behavioral health care, dental care and preventive services;
- Combat racial inequities; and
- Improve health outcomes and well-being for low-income young children.

This demonstration request will also end churn among Medicaid-enrolled adults for the year after they leave a Colorado DOC facility and re-enter the community, enabling these individuals and their providers to better address their physical and behavioral health care needs. Ensuring continuous coverage for previously incarcerated adults not only improves health outcomes but supports stability and may also improve public safety by reducing rates of recidivism. For example, adults with substance use disorder (SUD) convictions have a greater risk of criminal re-involvement and recidivism.⁴

¹ Continuous Eligibility Medical Coverage Act, HB23-1300. 2023 Colorado State Legislative Session. Retrieved from <https://leg.colorado.gov/bills/hb23-1300>

² In Colorado, the Children's Health Insurance Program is called the Child Health Plan Plus (CHP+)

³ Alker, J., Kenney G., Rosenbaum S. (2022) *The Biden Administration Should Approve Oregon's Request To Cover Children Until Their Sixth Birthday*. Health Affairs. Retrieved from: <https://www.healthaffairs.org/content/forefront/biden-administration-should-approve-oregon-s-request-cover-children-until-their-sixth>

⁴ NIDA. (2020) *Criminal Justice DrugFacts*. National Institute on Drug Abuse. Retrieved from: <https://nida.nih.gov/publications/drugfacts/criminal-justice>



This request will ensure that coverage disruptions do not prevent adults leaving incarceration in Colorado DOC facilities from receiving ongoing treatment for physical or behavioral health needs during a critical time that can improve SUD and mental health treatment, reduce recidivism rates and reduce costly hospitalizations and unnecessary ED visits.⁵ This request seeks to:

- Ensure 12 months of continuous Medicaid coverage for adults leaving a DOC facility;
- Promote longer-term access to and continuity of physical and behavioral health care and care coordination;
- Combat racial inequities; and
- Improve short and long-term physical and behavioral health outcomes and reduce recidivism for adults leaving a Colorado DOC facility.

This notice is submitted pursuant to Title 42 Code of Federal Regulations, Part 431.408, Subpart G, which outlines public notice processes and transparency requirements for Section 1115 Demonstrations.

⁵ Frank, J. W., Linder, J. A., Becker, W. C., Fiellin, D. A., & Wang, E. A. (2014) *Increased hospital and emergency department utilization by individuals with recent criminal justice involvement: results of a national survey*. Journal of general internal medicine, 29(9), 1226-1233. Retrieved from: <https://doi.org/10.1007/s11606-014-2877-y>



Calendar of Hearings

Hearing Date/Time	Agency	Location
02/15/2024 09:15 AM	Division of Gaming - Rules promulgated by Gaming Commission	1707 Cole Blvd, Redrocks Conference Room, Lakewood, CO 80401, and virtually
02/27/2024 10:00 AM	Hearings Division	Zoom Meeting Link: https://us02web.zoom.us/j/84483688350 Meeting ID: 844 8368 8350
03/13/2024 09:00 AM	Colorado State Board of Education	201 E. Colfax, Denver
03/13/2024 09:00 AM	Colorado State Board of Education	201 E. Colfax, Denver
02/16/2024 10:00 AM	Division of Professions and Occupations - State Board of Landscape Architects	Webinar only - See below
02/22/2024 10:00 AM	Division of Professions and Occupations - Colorado Office of Combative Sports	Webinar only - See below
02/27/2024 09:00 AM	Water And Wastewater Facility Operators Certification Board	Online only: https://us02web.zoom.us/meeting/register/tZcof-6tqTsvG9U_2RlfBOFX5purfRpKjJGp
02/21/2024 10:00 AM	Center for Health and Environmental Data (1006, 1009 Series)	4300 Cherry Creek Drive South, Denver, CO 80246 or https://us02web.zoom.us/meeting/register/tZcuc-GhrjlvGNdeqNvPKBx9kE33cVnwQYb6#/registration
02/21/2024 10:00 AM	Hazardous Materials and Waste Management Division	4300 Cherry Creek Drive South, Denver, CO 80246 or https://us02web.zoom.us/meeting/register/tZcuc-GhrjlvGNdeqNvPKBx9kE33cVnwQYb6#/registration
02/21/2024 10:00 AM	Hazardous Materials and Waste Management Division	4300 Cherry Creek Drive South, Denver, CO 80246 or https://us02web.zoom.us/meeting/register/tZcuc-GhrjlvGNdeqNvPKBx9kE33cVnwQYb6#/registration
02/20/2024 09:00 AM	Hazardous Materials and Waste Management Division	This meeting will be held online only at: https://us02web.zoom.us/meeting/register/tZ0ldeyvqDktG9A80u-6CDaKszafa2dunsSD
02/20/2024 09:00 AM	Hazardous Materials and Waste Management Division	This meeting will be held online only at: https://us02web.zoom.us/meeting/register/tZ0ldeyvqDktG9A80u-6CDaKszafa2dunsSD
02/20/2024 09:00 AM	Hazardous Materials and Waste Management Division	This meeting will be held online only at: https://us02web.zoom.us/meeting/register/tZ0ldeyvqDktG9A80u-6CDaKszafa2dunsSD
02/22/2024 09:00 AM	Plant Industry Division	via Zoom - link is contained in the hearing notice
02/22/2024 12:00 PM	Colorado Universal Preschool Program	Webinar Only: https://us02web.zoom.us/meeting/register/tZlqc-yspj0uGtT5EP36wKEjltxdR1mb0z3Y