



COLORADO

Water Quality
Control Commission

Department of Public Health & Environment

NOTICE OF PUBLIC RULEMAKING HEARING BEFORE THE COLORADO WATER QUALITY CONTROL COMMISSION

SUBJECT:

For consideration of the adoption of new temporary modifications and revisions to current temporary modifications of water quality standards expiring on or before December 31, 2020, and new site specific standards that allow for the deletion of current temporary modifications expiring on or before December 31, 2020, for multiple segments in the Classifications and Numeric Standards for:

- Arakansas River Basin, Regulation #32 (5 CCR 1002-32);
- Upper Colorado River Basin and North Platte River, Regulation #33 (5 CCR 1002-33);
- San Juan River and Dolores River Basins, Regulation #34 (5 CCR 1002-34);
- Gunnison and Lower Dolores River Basins, Regulation #35 (5CCR 1002-35);
- Rio Grande Basin, Regulation #36 (5 CCR 1002-36);
- Lower Colorado River Basin, Regulation #37 (5 CCR 1002-37); and
- South Platte River Basin, Laramie River Basin, Republican River Basin, Smoky Hill River Basin, Regulation #38 (5 CCR 1002-38).

Proposed revisions and proposed Statements of Basis, Specific Statutory Authority and Purpose have been submitted by the following:

- Exhibit 1 - Regulation #32, Water Quality Control Division (division);
- Exhibit 2 - Regulation #33, division;
- Exhibit 3 - Regulation #34, division;
- Exhibit 4 - Regulation #35, division;
- Exhibit 5 - Regulation #36, division;
- Exhibit 6 - Regulation #37, division;
- Exhibit 7 - Regulation #38, division;
- Exhibit 8 - Regulation #38, Plum Creek; and
- Exhibit 9 - Regulation #38, Black Hawk.

In these attachments, proposed new language is shown with double-underlining and proposed deletions are shown with ~~strikeouts~~. Any alternative proposals related to proposed new temporary modifications or current temporary modifications identified in Exhibits 1 through 9, with expiration dates on or before December 31, 2020, will also be considered.

SCHEDULE OF IMPORTANT DATES

Proponent's prehearing statement due	09/19/2018 5 pm	Additional information below.
Party status requests due	10/03/2018 5 pm	Additional information below.
Responsive prehearing	10/17/2018	Additional information below.

statements due	5 pm	
Rebuttal statements due	11/19/2018 5 pm	Additional information below.
Last date for submittal of motions	11/26/2018 5 pm	Additional information below.
Notify commission office if participating in prehearing conference by phone	11/26/2018 by noon	Send email to cdphe.wgcc@state.co.us with participant(s) name(s)
Prehearing Conference (mandatory for parties)	11/27/2018 3:00 pm	Florence Sabin Conference Room Department of Public Health and Environment 4300 Cherry Creek Drive South Denver, CO 80246 Call-in: 1-857-216-6700, Code: 425132
Rulemaking Hearing	12/10/2018 10:00 am	Florence Sabin Conference Room Department of Public Health and Environment 4300 Cherry Creek Drive South Denver, CO 80246

HEARING SUBMITTALS:

For this hearing, the commission will receive all submittals electronically. Submittals must be provided as PDF documents, except for raw data exhibits which may be provided as Excel workbooks. Submittals may be emailed to cdphe.wgcc@state.co.us, provided via an FTP site, CD or flash drive, or otherwise conveyed to the commission office so as to be received no later than the specified date.

PARTY STATUS:

Party status requests must be in writing and must provide:

- the organization's name,
- one contact person,
- a mailing address,
- a phone number, and
- email addresses of all individuals associated with the party who wish to be notified when new submittals are available on the commission's website for review.

In accordance with section 25-8-104(2)(d), C.R.S., any person who believes that the actions proposed in this notice have the potential to cause material injury to his or her water rights is requested to so indicate, along with an explanation of the alleged harm, in their party status request.

PREHEARING AND REBUTTAL STATEMENTS:

Each party must submit a prehearing statement: parties that have proposed revisions attached as exhibits to the notice must submit a proponent's prehearing statement. All other parties must submit a responsive prehearing statement. Proponents may also submit responsive prehearing statements when there are multiple proposals attached to the notice.

Each prehearing and rebuttal statement must be provided as a separate PDF document from any accompanying written testimony or exhibits.

Following the rebuttal statement due date, no other written materials will be accepted from parties except for good cause shown.

Oral testimony at the hearing should primarily summarize written material previously submitted. The hearing will emphasize commission questioning of parties and other interested persons about their written prehearing submittals. Introduction of written material at the hearing by those with party status will not be permitted unless authorized by the commission.

PREHEARING CONFERENCE:

Attendance at the prehearing conference is mandatory for all persons requesting party status. Parties needing to participate by telephone are encouraged to notify the commission office prior to the prehearing conference. Remote participants can call 1-857-216-6700 and enter the conference code 425132.

Following the cut-off date for motions, no motions will be accepted, except for good cause shown.

PUBLIC PARTICIPATION ENCOURAGED:

The commission encourages input from non-parties, either orally at the hearing or in writing prior to the hearing. Written submissions should be emailed to cdphe.wqcc@state.co.us by November 28, 2018.

SPECIFIC STATUTORY AUTHORITY:

The provisions of sections 25-8-202(1)(a), (b), and (2); 25-8-203; 25-8-204; and 25-8-402, C.R.S., provide the specific statutory authority for consideration of the regulatory amendments proposed by this notice. Should the commission adopt the regulatory language as proposed in this notice or alternative amendments, 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 6th day of August, 2018 at Denver, Colorado.

WATER QUALITY CONTROL COMMISSION

Trisha Oeth, Administrator

EXHIBIT 1
WATER QUALITY CONTROL DIVISION

DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Water Quality Control Commission

REGULATION NO. 32 - CLASSIFICATIONS AND NUMERIC STANDARDS FOR ARKANSAS RIVER BASIN

5 CCR 1002-32

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32.62 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; DECEMBER 10, 2018 RULEMAKING; FINAL ACTION JANUARY 14, 2019; EFFECTIVE DATE JUNE 30, 2019

The provisions of C.R.S. 25-8-202(1)(a), (b) and (2); 25-8-203; 25-8-204; and 25-8-402; provide the specific statutory authority for adoption of these regulatory amendments. The commission also adopted in compliance with 24-4-103(4) C.R.S. the following statement of basis and purpose.

BASIS AND PURPOSE

Pursuant to the requirements in the Basic Standards (at 31.7(3)), the commission reviewed the status of temporary modifications scheduled to expire before December 31, 2020 to determine whether the temporary modification should be modified, eliminated, or extended.

For the temporary modifications set to expire after the effective date of this hearing, the commission reviewed progress toward resolving the uncertainty in the underlying standard and/or the extent to which conditions are a result of natural or anthropogenic conditions, and evaluated whether the temporary modifications were still necessary. The commission took no action on the following temporary modifications:

Upper Arkansas Segment 8b: temporary modifications of the chronic cadmium and acute and chronic zinc standards (expire 6/30/2020). Resurrection Mining Company continues to make progress to resolve the uncertainty. The commission made no change to the expiration date, as the original time allotment was deemed adequate to resolve the uncertainty.

The commission took no action on temporary modifications that were set to expire on or before the effective date of this hearing. The commission deleted the following temporary modifications, which were allowed to expire:

Middle Arkansas Segment 4b (all)
Middle Arkansas Segment 6b (temperature)
Lower Arkansas Segment 1a (selenium and sulfate).

**COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
WATER QUALITY CONTROL COMMISSION**

5 CCR 1002-32

**REGULATION NO. 32
CLASSIFICATIONS AND NUMERIC STANDARDS
FOR
ARKANSAS RIVER BASIN**

**APPENDIX 32-1
Stream Classifications and Water Quality Standards Tables**

Effective ~~12/31/2018~~ 06/30/2019

REGULATION #32 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Upper Arkansas River Basin

8b. Mainstem of Iowa Gulch from a point immediately below the historic upper ASARCO water supply intake at 39.224327, -106.223432 to a point immediately below the headgate of the Paddock #1 Ditch (Iowa Ditch).

COARUA08B Classifications		Physical and Biological			Metals (ug/L)		
Designation			DM	MWAT		acute	chronic
UP	Agriculture						
	Aq Life Cold 2	Temperature °C	CS-II	CS-II	Arsenic	340	---
	Recreation E		acute	chronic	Arsenic(T)	---	100
Qualifiers:		D.O. (mg/L)	---	6.0	Cadmium	SSE*	TVS
Other:		D.O. (spawning)	---	7.0	Chromium III	TVS	TVS
Temporary Modification(s):		pH	6.5 - 9.0	---	Chromium III(T)	---	100
Cadmium(chronic) = 1.2		chlorophyll a (mg/m2)	---	150	Chromium VI	TVS	TVS
Zinc(chronic) = 325		E. Coli (per 100 mL)	---	126	Copper	TVS	TVS
Zinc(acute) = 593					Iron(T)	---	1000
Expiration Date of 6/30/2020					Inorganic (mg/L)		
			acute	chronic	Lead	TVS	TVS
*Cadmium(acute) = (1.136672- [ln(hardness)*0.041838]*e^(0.9789*ln(hardness)- 3.5146)		Ammonia	TVS	TVS	Manganese	TVS	TVS
*Uranium(acute) = See 32.5(3) for details.		Boron	---	0.75	Mercury(T)	---	0.01
*Uranium(chronic) = See 32.5(3) for details.		Chloride	---	---	Molybdenum(T)	---	150
		Chlorine	0.019	0.011	Nickel	TVS	TVS
		Cyanide	---	---	Selenium	TVS	TVS
		Nitrate	100	---	Silver	TVS	TVS(tr)
		Nitrite	0.05	---	Uranium	varies*	varies*
		Phosphorus	---	0.11	Zinc	TVS	TVS
		Sulfate	---	---			
		Sulfide	---	0.002			

All metals are dissolved unless otherwise noted.
T = total recoverable
t = total
tr = trout

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 32.6 for details on TVS, TVS(tr), WS, temperature standards.

REGULATION #32 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Middle Arkansas River Basin

4b. Mainstem of Rock Creek, Salt Creek and Peck Creek from their sources to the confluence with the Arkansas River.							
COARMA04B	Classifications	Physical and Biological			Metals (ug/L)		
Designation			DM	MWAT			
UP	Agriculture Aq Life Warm 1 Recreation E	Temperature °C	WS-II	WS-II	Arsenic	340	---
Qualifiers:			acute	chronic	Arsenic(T)	---	7.6
Other:		D.O. (mg/L)	---	5.0	Cadmium	TVS	TVS
Temporary Modification(s):		pH	6.5 - 9.0	---	Chromium III	TVS	TVS
Ammonia(ac/ch) = current conditions		chlorophyll a (mg/m2)	---	150	Chromium III(T)	---	100
Arsenic(ac/ch) = current conditions		E. Coli (per 100 mL)	---	126	Chromium VI	TVS	TVS
Boron(chronic) = current conditions		Inorganic (mg/L)			Copper	TVS	TVS
Cadmium(ac/ch) = current conditions			acute	chronic	Iron(T)	---	1000
Chlorine(ac/ch) = current conditions		Ammonia	TVS	TVS	Lead	TVS	TVS
chlorophyll a (mg/m2)(chronic) = current conditions		Boron	---	0.75	Manganese	TVS	TVS
Chromium III(chronic) = current conditions		Chloride	---	---	Mercury(T)	---	0.01
Chromium III(ac/ch) = current conditions		Chlorine	0.019	0.011	Molybdenum(T)	---	150
Chromium VI(ac/ch) = current conditions		Cyanide	0.005	---	Nickel	TVS	TVS
Copper(ac/ch) = current conditions		Nitrate	100	---	Selenium	TVS	TVS
Cyanide(acute) = current conditions		Nitrite	0.05	---	Silver	TVS	TVS
D.O. (mg/L)(chronic) = current conditions		Phosphorus	---	0.17	Uranium	varies*	varies*
E. Coli (per 100 mL)(chronic) = current conditions		Sulfate	---	---	Zinc	TVS	TVS
Iron(chronic) = current conditions		Sulfide	---	0.002			
Lead(ac/ch) = current conditions							
Manganese(ac/ch) = current conditions							
Mercury(chronic) = current conditions							
Molybdenum(chronic) = current conditions							
Nickel(ac/ch) = current conditions							
Nitrate(acute) = current conditions							
Nitrite(chronic) = current conditions							
pH(acute) = current conditions							
Phosphorus(chronic) = current conditions							
Selenium(ac/ch) = current conditions							
Silver(ac/ch) = current conditions							
Sulfide(chronic) = current conditions							
Zinc(ac/ch) = current conditions							
Expiration Date of 12/31/2018							
*Uranium(acute) = See 32.5(3) for details.							
*Uranium(chronic) = See 32.5(3) for details.							

All metals are dissolved unless otherwise noted.
T = total recoverable
t = total
tr = trout

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 32.6 for details on TVS, TVS(tr), WS, temperature standards.

REGULATION #32 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Middle Arkansas River Basin

6b. Mainstem of the Saint Charles River from the confluence with Edson Arroyo to the confluence with the Arkansas River.							
COARMA06B	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute	chronic		
UP	Aq Life Warm 2	varies*	varies*	Arsenic	340	---	
	Recreation E	acute	chronic	Arsenic(T)	---	0.02-10 ^A	
	Water Supply	D.O. (mg/L)	---	5.0	Cadmium	TVS	
Qualifiers:		pH	6.5 - 9.0	---	Cadmium(T)	5.0	
Other:		chlorophyll a (mg/m2)	---	---	Chromium III	---	
Temporary Modification(s):		E. Coli (per 100 mL)	---	126	Chromium III(T)	50	
temperature(DM/MWAT) = current conditions		Inorganic (mg/L)			Chromium VI	TVS	TVS
Expiration Date of 12/31/2018		acute	chronic	Copper	TVS	TVS	
*Selenium(acute) = See selenium assessment location at 32.6(4).		Ammonia	TVS	TVS	Iron	---	WS
*Selenium(chronic) = See selenium assessment location at 32.6(4).		Boron	---	0.75	Iron(T)	---	1000
*Uranium(acute) = See 32.5(3) for details.		Chloride	---	250	Lead	TVS	TVS
*Uranium(chronic) = See 32.5(3) for details.		Chlorine	0.019	0.011	Lead(T)	50	---
*Temperature =		Cyanide	0.005	---	Manganese	TVS	TVS/WS
DM=32.6 and MWAT=WS-II from 3/1-11/30		Nitrate	10	---	Mercury(T)	---	0.01
DM=WS-II and MWAT=WS-II from 12/1-2/29		Nitrite	0.05	---	Molybdenum(T)	---	150
		Phosphorus	---	---	Nickel	TVS	TVS
		Sulfate	---	WS	Nickel(T)	---	100
		Sulfide	---	0.002	Selenium	173*	50*
					Silver	TVS	TVS
					Uranium	varies*	varies*
					Zinc	TVS	TVS

All metals are dissolved unless otherwise noted.
T = total recoverable
t = total
tr = trout

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 32.6 for details on TVS, TVS(tr), WS, temperature standards.

REGULATION #32 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Arkansas River Basin

1a. Mainstem of the Arkansas River from a point immediately above the confluence with Fountain Creek to immediately above the Colorado Canal headgate near Avondale.									
COARLA01A	Classifications	Physical and Biological			Metals (ug/L)				
Designation			DM	MWAT					
UP	Agriculture Aq Life Warm 2 Recreation E Water Supply	Temperature °C	varies*	varies*	Arsenic	340			
			acute	chronic	Arsenic(T)	---			
Qualifiers:		D.O. (mg/L)	---	5.0	Cadmium	TVS			
Other:		pH	6.5 - 9.0	---	Cadmium(T)	5.0			
Temporary Modification(s):		chlorophyll a (mg/m2)	---	---	Chromium III	---			
Selenium(ac/ch) = existing quality		E. Coli (per 100 mL)	---	126	Chromium III(T)	50			
Sulfate(chronic) = existing quality		Inorganic (mg/L)			Chromium VI	TVS			
Expiration Date of 12/31/2018			acute	chronic	Copper	TVS			
Discharger Specific Variance(s):		Ammonia	TVS	TVS	Iron	---			
Selenium(acute) = 19.1 µg/L: narrative		Boron	---	0.75	Iron(T)	---			
Selenium(chronic) = 14.1 µg/L: narrative		Chloride	---	250	Lead	TVS			
Sulfate(chronic) = 329 mg/L: narrative		Chlorine	0.019	0.011	Lead(T)	50			
Expiration Date of 12/31/2028		Cyanide	0.005	---	Manganese	TVS			
*Uranium(acute) = See 32.5(3) for details.		Nitrate	10	---	Mercury(T)	---			
*Uranium(chronic) = See 32.5(3) for details.		Nitrite	0.5	---	Molybdenum(T)	---			
*Temperature =		Phosphorus	---	---	Nickel	TVS			
DM=WS-II and MWAT=WS-II from 1/1-11/30		Sulfate	---	329	Nickel(T)	---			
DM= 21.5 and MWAT=20.7 from 12/1-12/31		Sulfide	---	0.002	Selenium	19.1			
*Variance: Selenium = see 32.6(6)(c) for details on variance for City of Pueblo.						Silver	TVS		
Variance: Sulfate = see 32.6(6)(c) for details on variance for City of Pueblo.						Uranium	varies		
								Zinc	TVS

All metals are dissolved unless otherwise noted.
 T = total recoverable
 t = total
 tr = trout

D.O. = dissolved oxygen
 DM = daily maximum
 MWAT = maximum weekly average temperature
 See 32.6 for details on TVS, TVS(tr), WS, temperature standards.

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS – FOOTNOTES

- (A) Whenever a range of standards is listed and referenced to this footnote, the first number in the range is a strictly health-based value, based on the Commission's established methodology for human health-based standards. The second number in the range is a maximum contaminant level, established under the federal Safe Drinking Water Act that has been determined to be an acceptable level of this chemical in public water supplies, taking treatability and laboratory detection limits into account. Control requirements, such as discharge permit effluent limitations, shall be established using the first number in the range as the ambient water quality target, provided that no effluent limitation shall require an "end-of-pipe" discharge level more restrictive than the second number in the range. Water bodies will be considered in attainment of this standard, and not included on the Section 303(d) List, so long as the existing ambient quality does not exceed the second number in the range.
- (B) *Reserved.*
- (C) *Reserved.*

EXHIBIT 2
WATER QUALITY CONTROL DIVISION

DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Water Quality Control Commission

REGULATION NO. 33 - CLASSIFICATIONS AND NUMERIC STANDARDS FOR UPPER COLORADO RIVER BASIN AND NORTH PLATTE RIVER (PLANNING REGION 12)

5 CCR 1002-33

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33.61 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; DECEMBER 10, 2018 RULEMAKING; FINAL ACTION JANUARY 14, 2019 EFFECTIVE DATE JUNE 30, 2019

The provisions of C.R.S. 25-8-202(1)(a), (b) and (2); 25-8-203; 25-8-204; and 25-8-402; provide the specific statutory authority for adoption of these regulatory amendments. The Commission also adopted in compliance with 24-4-103(4) C.R.S. the following statement of basis and purpose.

BASIS AND PURPOSE

Pursuant to the requirements in the Basic Standards (at 31.7(3)), the commission reviewed the status of temporary modifications scheduled to expire before December 31, 2020 to determine whether the temporary modification should be modified, eliminated, or extended.

For the temporary modifications set to expire after the effective date of this hearing, the commission reviewed progress toward resolving the uncertainty in the underlying standard and/or the extent to which conditions are a result of natural or anthropogenic conditions, and evaluated whether the temporary modifications were still necessary. The commission took no action on the following temporary modifications:

Blue River Segment 14: temporary modification of the chronic molybdenum standard (expires 6/30/2020). Climax Molybdenum Company continues to make progress to resolve the uncertainty. The commission made no change to the expiration date, as the original time allotment was deemed adequate to resolve the uncertainty.

**COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
WATER QUALITY CONTROL COMMISSION**

5 CCR 1002-33

**REGULATION NO. 33
CLASSIFICATIONS AND NUMERIC STANDARDS
FOR
UPPER COLORADO RIVER BASIN AND
NORTH PLATTE RIVER (PLANNING REGION 12)**

**APPENDIX 33-1
Stream Classifications and Water Quality Standards Tables**

Effective 06/30/~~2018~~2019

REGULATION #33 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Blue River Basin

14. Mainstem of Tenmile Creek, including all tributaries and wetlands from a point immediately above the confluence with West Tenmile Creek to Dillon Reservoir, except for the specific listing in Segment 16.							
COUCBL14	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture		DM	MWAT		acute	chronic
Reviewable	Aq Life Cold 1	Temperature °C	CS-I	CS-I	Aluminum	---	---
	Recreation E		acute	chronic	Arsenic	340	---
	Water Supply	D.O. (mg/L)	---	6.0	Arsenic(T)	---	0.02
Qualifiers:		D.O. (spawning)	---	7.0	Beryllium	---	---
Other:		pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS
Temporary Modification(s):		chlorophyll a (mg/m2)	---	150*	Chromium III	---	TVS
Arsenic(chronic) = hybrid		E. Coli (per 100 mL)	---	126	Chromium III(T)	50	---
Expiration Date of 12/31/2021		Inorganic (mg/L)			Chromium VI	TVS	TVS
Molybdenum(chronic) = current conditions			acute	chronic	Copper	TVS	TVS
Expiration Date of 6/30/2020		Ammonia	TVS	TVS	Iron	---	WS
*chlorophyll a (mg/m2)(chronic) = applies only above the facilities listed at 33.5(4).		Boron	---	0.75	Iron(T)	---	1000
*Phosphorus(chronic) = applies only above the facilities listed at 33.5(4).		Chloride	---	250	Lead	TVS	TVS
		Chlorine	0.019	0.011	Manganese	TVS	TVS/WS
		Cyanide	0.005	---	Mercury	---	0.01(t)
		Nitrate	10	---	Molybdenum(T)	---	210
		Nitrite	---	0.05	Nickel	TVS	TVS
		Phosphorus	---	0.11*	Selenium	TVS	TVS
		Sulfate	---	WS	Silver	TVS	TVS(tr)
		Sulfide	---	0.002	Uranium	---	---
					Zinc	TVS	TVS/TVS(sc)

All metals are dissolved unless otherwise noted.
T = total recoverable
t = total
tr = trout
sc = sculpin

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 33.6 for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS – FOOTNOTES

- (A) Whenever a range of standards is listed and referenced to this footnote, the first number in the range is a strictly health-based value, based on the Commission's established methodology for human health-based standards. The second number in the range is a maximum contaminant level, established under the federal Safe Drinking Water Act that has been determined to be an acceptable level of this chemical in public water supplies, taking treatability and laboratory detection limits into account. Control requirements, such as discharge permit effluent limitations, shall be established using the first number in the range as the ambient water quality target, provided that no effluent limitation shall require an "end-of-pipe" discharge level more restrictive than the second number in the range. Water bodies will be considered in attainment of this standard, and not included on the Section 303(d) List, so long as the existing ambient quality does not exceed the second number in the range.

- (B) Assessment of adequate refuge shall rely on the Cold Large Lake table value temperature criterion and applicable dissolved oxygen standard rather than the site-specific temperature standard.

EXHIBIT 3
WATER QUALITY CONTROL DIVISION

DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Water Quality Control Commission

REGULATION NO. 34 - CLASSIFICATIONS AND NUMERIC STANDARDS FOR SAN JUAN RIVER
AND DOLORES RIVER BASINS

5 CCR 1002-34

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34.49 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; DECEMBER 10, 2018 RULEMAKING; FINAL ACTION JANUARY 14, 2019; EFFECTIVE DATE JUNE 30, 2019

The provisions of C.R.S. 25-8-202(1)(a), (b) and (2); 25-8-203; 25-8-204; and 25-8-402; provide the specific statutory authority for adoption of these regulatory amendments. The commission also adopted in compliance with 24-4-103(4) C.R.S. the following statement of basis and purpose.

BASIS AND PURPOSE:

Pursuant to the requirements in the Basic Standards (at 31.7(3)), the commission reviewed the status of temporary modifications scheduled to expire before December 31, 2020 to determine whether the temporary modification should be modified, eliminated, or extended.

For the temporary modifications set to expire after the effective date of this hearing, the commission reviewed progress toward resolving the uncertainty in the underlying standard and/or the extent to which conditions are a result of natural or anthropogenic conditions, and evaluated whether the temporary modifications were still necessary. The commission took no action on the following temporary modifications:

La Plata Segment 7a: temporary modification of the ammonia standards (expires 6/30/2020). Vista Verde continues to make progress on resolving the uncertainty regarding the degree to which the ammonia loading from Vista Verde's effluent discharge is irreversible, and will complete an alternatives analysis to resolve this uncertainty and determine how much water quality improvement is feasible. The commission made no change to the expiration date, as the original time allotment was deemed adequate to resolve the uncertainty.

La Plata Segment 9: temporary modification of the ammonia standards (expires 6/30/2020). Lee Mobile Home Park continues to make progress on resolving the uncertainty regarding the degree to which the ammonia loading from Lee Mobile Home Park's effluent discharge is irreversible, and will complete an alternatives analysis to resolve this uncertainty and determine how much water quality improvement is feasible. The commission made no change to the expiration date, as the original time allotment was deemed adequate to resolve the uncertainty.

**COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
WATER QUALITY CONTROL COMMISSION**

5 CCR 1002-34

**REGULATION NO. 34
CLASSIFICATIONS AND NUMERIC STANDARDS
FOR
SAN JUAN RIVER AND DOLORES RIVER BASINS**

**APPENDIX 34-1
Stream Classifications and Water Quality Standards Tables**

Effective ~~12/31/2017~~ 06/30/2019

REGULATION #34 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

La Plata River, Mancos River, McElmo Creek and San Juan River in Montezuma County and Dolores County

7a. Mainstem of McElmo Creek from the source to the confluence with Alkali Canyon. Mainstem of Yellow Jacket Creek, including all tributaries and wetlands, from the source to the confluence with McElmo Creek.						
COSJLP07A	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	acute	chronic	
Reviewable	Aq Life Warm 1 Recreation E	Temperature °C	WS-II	WS-II	Aluminum	---
			acute	chronic	Arsenic	340
Qualifiers:		D.O. (mg/L)	---	5.0	Arsenic(T)	---
Other:		pH	6.5 - 9.0	---	Beryllium	---
Temporary Modification(s):		chlorophyll a (mg/m2)	---	150*	Cadmium	TVS
Ammonia(ac/ch) = current conditions		E. Coli (per 100 mL)	---	126	Chromium III	TVS
Expiration Date of 6/30/2020		Inorganic (mg/L)			Chromium III(T)	---
			acute	chronic	Chromium VI	TVS
*chlorophyll a (mg/m2)(chronic) = applies only above the facilities listed at 34.5(5).		Ammonia	TVS	TVS	Copper	TVS
*Phosphorus(chronic) = applies only above the facilities listed at 34.5(5).		Boron	---	0.75	Iron(T)	---
		Chloride	---	---	Lead	TVS
		Chlorine	0.019	0.011	Manganese	TVS
		Cyanide	0.005	---	Mercury	---
		Nitrate	100	---	Molybdenum(T)	---
		Nitrite	0.05	---	Nickel	TVS
		Phosphorus	---	0.17*	Selenium	TVS
		Sulfate	---	---	Silver	TVS
		Sulfide	---	0.002	Uranium	---
					Zinc	TVS

9. Unnamed tributary to Ritter Draw (confluence at 37.4059, -108.5325).						
COSJLP09	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	acute	chronic	
UP	Aq Life Warm 2 Recreation E	Temperature °C	WS-III	WS-III	Aluminum	---
			acute	chronic	Arsenic	340
Qualifiers:		D.O. (mg/L)	---	5.0	Arsenic(T)	---
Other:		pH	6.5 - 9.0	---	Beryllium	---
Temporary Modification(s):		chlorophyll a (mg/m2)	---	150*	Cadmium	TVS
Ammonia(ac/ch) = current conditions		E. Coli (per 100 mL)	---	126	Chromium III	TVS
Expiration Date of 6/30/2020		Inorganic (mg/L)			Chromium III(T)	---
			acute	chronic	Chromium VI	TVS
*chlorophyll a (mg/m2)(chronic) = applies only above the facilities listed at 34.5(5).		Ammonia	TVS	TVS	Copper	TVS
*Phosphorus(chronic) = applies only above the facilities listed at 34.5(5).		Boron	---	0.75	Iron(T)	---
		Chloride	---	250	Lead	TVS
		Chlorine	0.019	0.011	Manganese	TVS
		Cyanide	0.005	---	Mercury	---
		Nitrate	100	---	Molybdenum(T)	---
		Nitrite	0.05	---	Nickel	TVS
		Phosphorus	---	0.17*	Selenium	TVS
		Sulfate	---	250	Silver	TVS
		Sulfide	---	0.002	Uranium	---
					Zinc	TVS

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS – FOOTNOTES

- (A) Whenever a range of standards is listed and referenced to this footnote, the first number in the range is a strictly health-based value, based on the Commission's established methodology for human health-based standards. The second number in the range is a maximum contaminant level, established under the federal Safe Drinking Water Act that has been determined to be an acceptable level of this chemical in public water supplies, taking treatability and laboratory detection limits into account. Control requirements, such as discharge permit effluent limitations, shall be established using the first number in the range as the ambient water quality target, provided that no effluent limitation shall require an "end-of-pipe" discharge level more restrictive than the second number in the range. Water bodies will be considered in attainment of this standard, and not included on the Section 303(d) List, so long as the existing ambient quality does not exceed the second number in the range.
- (B) Assessment of adequate refuge shall rely on the Cold Large Lake table value temperature criterion and applicable dissolved oxygen standard rather than the site-specific temperature standard.
- (C) For certain site-specific temperature standards, the temperature excursions listed in Table I - Footnote 5(c) of 31.16 do not apply. Assessment of ambient-based temperature standards should be conducted in a way that represents similar conditions to those under which the criteria were developed (i.e., air, low flow, and warming event excursions should not apply). Similarly, where site-specific adjustments to the winter shoulder season have been adopted, the winter shoulder season excursion does not apply.

EXHIBIT 4
WATER QUALITY CONTROL DIVISION

DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Water Quality Control Commission

REGULATION NO. 35 - CLASSIFICATIONS AND NUMERIC STANDARDS FOR GUNNISON AND LOWER DOLORES RIVER BASINS

5 CCR 1002-35

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35.46 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; DECEMBER 10, 2018 RULEMAKING; FINAL ACTION JANUARY 14, 2019; EFFECTIVE DATE JUNE 30, 2019

The provisions of C.R.S. 25-8-202(1)(a), (b) and (2); 25-8-203; 25-8-204; and 25-8-402; provide the specific statutory authority for adoption of these regulatory amendments. The commission also adopted in compliance with 24-4-103(4) C.R.S. the following statement of basis and purpose.

BASIS AND PURPOSE:

Pursuant to the requirements in the Basic Standards (at 31.7(3)), the commission reviewed the status of temporary modifications scheduled to expire before December 31, 2020 to determine whether the temporary modifications should be modified, eliminated, or extended.

The commission took no action on the following temporary modification:

Upper Gunnison Segment 21: temporary modification of the chronic uranium standard (expires 12/31/2022). As requested by the commission at 35.45(N), Homestake Mining Company provided an update on its work to resolve the uncertainty in the chronic uranium standard. Homestake continues to make progress on resolving the uncertainty underlying the temporary modification and determining the lowest practical level of uranium that can be achieved. The commission made no change to the expiration date, as the original time allotment was deemed adequate to resolve the uncertainty.

**COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
WATER QUALITY CONTROL COMMISSION**

5 CCR 1002-35

**REGULATION NO. 35
CLASSIFICATIONS AND NUMERIC STANDARDS
FOR
GUNNISON AND LOWER DOLORES RIVER BASINS**

**APPENDIX 35-1
Stream Classifications and Water Quality Standards Tables**

Effective ~~12/31/2017~~ 06/30/2019

REGULATION #35 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Upper Gunnison River Basin

21. Mainstem of Marshall Creek, including all tributaries and wetlands, from the source to the confluence with Tomichi Creek, except for specific listings in Segment 20.							
COGUUG21	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT		acute	chronic	
Reviewable	Aq Life Cold 1	Temperature °C	CS-I	CS-I	Aluminum	---	---
	Recreation U		acute	chronic	Arsenic	340	---
	Water Supply	D.O. (mg/L)	---	6.0	Arsenic(T)	---	0.02
Qualifiers:		D.O. (spawning)	---	7.0	Beryllium	---	---
Other:		pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS
Temporary Modification(s):		chlorophyll a (mg/m2)	---	150	Cadmium(T)	5.0	---
Arsenic(chronic) = hybrid		E. Coli (per 100 mL)	---	126	Chromium III	---	TVS
Expiration Date of 12/31/2021					Chromium III(T)	50	---
Uranium(chronic) = current condition*					Chromium VI	TVS	TVS
Expiration Date of 12/31/2022					Copper	TVS	TVS
*TempMod: Uranium = Mainstem of Marshall Creek from the confluence with Indian Creek to the confluence with Tomichi Creek					Iron	---	WS
					Iron(T)	---	1000
					Lead	TVS	TVS
					Lead(T)	50	---
					Manganese	TVS	TVS/WS
					Mercury	---	0.01(t)
					Molybdenum(T)	---	150
					Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	---	---
					Uranium(T)	---	16.8-30 ^A
					Zinc	TVS	TVS

All metals are dissolved unless otherwise noted.
 T = total recoverable
 t = total
 tr = trout
 sc = sculpin

D.O. = dissolved oxygen
 DM = daily maximum
 MWAT = maximum weekly average temperature
 See 35.6 for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS – FOOTNOTES

- (A) Whenever a range of standards is listed and referenced to this footnote, the first number in the range is a strictly health-based value, based on the Commission's established methodology for human health-based standards. The second number in the range is a maximum contaminant level, established under the federal Safe Drinking Water Act that has been determined to be an acceptable level of this chemical in public water supplies, taking treatability and laboratory detection limits into account. Control requirements, such as discharge permit effluent limitations, shall be established using the first number in the range as the ambient water quality target, provided that no effluent limitation shall require an "end-of-pipe" discharge level more restrictive than the second number in the range. Water bodies will be considered in attainment of this standard, and not included on the Section 303(d) List, so long as the existing ambient quality does not exceed the second number in the range.
- (B) *Reserved.*
- (C) For certain site-specific temperature standards, the temperature excursions listed in Table I - Footnote 5(c) of 31.16 do not apply. Assessment of ambient-based temperature standards should be conducted in a way that represents similar conditions to those under which the criteria were developed (i.e., air, low flow, and warming event excursions should not apply). Similarly, where site-specific adjustments to the winter shoulder season have been adopted, the winter shoulder season excursion does not apply.

EXHIBIT 5
WATER QUALITY CONTROL DIVISION

DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Water Quality Control Commission

REGULATION NO. 36 - CLASSIFICATIONS AND NUMERIC STANDARDS FOR RIO GRANDE BASIN

5 CCR 1002-36

36.43 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; DECEMBER 10, 2018 RULEMAKING; FINAL ACTION JANUARY 14, 2019; EFFECTIVE DATE JUNE 30, 2019

The provisions of C.R.S. 25-8-202(1)(a), (b) and (2); 25-8-203; 25-8-204; and 25-8-402; provide the specific statutory authority for adoption of these regulatory amendments. The commission also adopted in compliance with 24-4-103(4) C.R.S. the following statement of basis and purpose.

BASIS AND PURPOSE

Pursuant to the requirements in the Basic Standards (at 31.7(3)), the commission reviewed the status of temporary modifications scheduled to expire before December 31, 2020 to determine whether the temporary modifications should be modified, eliminated, or extended.

The commission took no action on temporary modifications that were set to expire on or before the effective date of this hearing. The commission deleted the following temporary modifications, which were allowed to expire:

Rio Grande segments 4a and 7 (acute and chronic ammonia).

**COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
WATER QUALITY CONTROL COMMISSION**

5 CCR 1002-36

**REGULATION NO. 36
CLASSIFICATIONS AND NUMERIC STANDARDS
FOR
RIO GRANDE BASIN**

**APPENDIX 36-1
Stream Classifications and Water Quality Standards Tables**

Effective ~~12/31/2018~~ 06/30/2019

REGULATION #36 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Rio Grande Basin

4a. Mainstem of the Rio Grande from a point immediately above the confluence with Willow Creek to a point immediately above the confluence with the South Fork Rio Grande.							
CORGRG04A	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute	chronic		
Reviewable	Aq Life Cold 1	Temperature °C	CS-II	CS-II	Arsenic	340	---
	Recreation E		acute	chronic	Arsenic(T)	---	0.02
	Water Supply	D.O. (mg/L)	---	6.0	Cadmium	TVS	varies*
Qualifiers:		D.O. (spawning)	---	7.0	Cadmium(T)	5.0	---
Other:		pH	6.5 - 9.0	---	Chromium III	---	TVS
Temporary Modification(s):		chlorophyll a (mg/m2)	---	---	Chromium III(T)	50	---
Ammonia(ac/ch) = current conditions		E. Coli (per 100 mL)	---	126	Chromium VI	TVS	TVS
Expiration Date of 12/31/2018					Copper	TVS	TVS
Arsenic(chronic) = hybrid					Iron	---	WS
Expiration Date of 12/31/2021					Iron(T)	---	1000
					Lead	TVS	TVS
*Cadmium(chronic) = See 36.6(4) for site-specific standards and assessment locations.					Lead(T)	50	---
Manganese(chronic) = See 36.6(4) for site-specific standards and assessment locations.					Manganese	TVS	varies
*Uranium(acute) = See 36.5(3) for details.					Mercury(T)	---	0.01
*Uranium(chronic) = See 36.5(3) for details.					Molybdenum(T)	---	150
*Zinc(acute) = See 36.6(4) for site-specific standards and assessment locations.					Nickel	TVS	TVS
*Zinc(chronic) = See 36.6(4) for site-specific standards and assessment locations.					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	varies*	varies*
					Zinc	varies*	varies*

All metals are dissolved unless otherwise noted.
T = total recoverable
t = total
tr = trout

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 36.6 for details on TVS, TVS(tr), WS, temperature standards.

REGULATION #36 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Rio Grande Basin

7. Mainstem of West Willow Creek from the Park Regent Mine dump (37.890445, -106.936868) to the confluence with East Willow Creek. Mainstem of Willow Creek, including all tributaries, from the confluence of East and West Willow Creeks to the confluence with the Rio Grande.							
CORGRG07	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture		DM	MWAT		acute	chronic
UP	Aq Life Cold 2	Temperature °C	CS-II	CS-II	Arsenic	340	---
	Recreation E		acute	chronic	Arsenic(T)	---	100
Qualifiers:		D.O. (mg/L)	---	6.0	Cadmium	varies*	varies*
Other:		D.O. (spawning)	---	7.0	Chromium III	TVS	TVS
Temporary Modification(s):		pH	6.5 - 9.0	---	Chromium III(T)	---	100
Ammonia(ac/ch) = current conditions*		chlorophyll a (mg/m2)	---	150*	Chromium VI	TVS	TVS
Expiration Date of 12/31/2018		E. Coli (per 100 mL)	---	126	Copper	varies*	varies*
					Iron(T)	---	1000
		Inorganic (mg/L)			Lead	varies*	varies*
		acute	chronic		Manganese	varies*	varies*
		Ammonia	TVS	TVS	Mercury(T)	---	0.01
		Boron	---	0.75	Molybdenum(T)	---	150
		Chloride	---	---	Nickel	TVS	TVS
		Chlorine	0.019	0.011	Selenium	TVS	TVS
		Cyanide	0.005	---	Silver	TVS	TVS
		Nitrate	100	---	Uranium	varies*	varies*
		Nitrite	10	---	Zinc	varies*	varies*
		Phosphorus	---	0.11*			
		Sulfate	---	---			
		Sulfide	---	0.002			

*chlorophyll a (mg/m2)(chronic) = applies only above the facilities listed at 36.5(4).
 *Phosphorus(chronic) = applies only above the facilities listed at 36.5(4).
 *Cadmium(acute) = See 36.6(4) for site-specific standards and assessment locations.
 *Cadmium(chronic) = See 36.6(4) for site-specific standards and assessment locations.
 *Copper(acute) = See 36.6(4) for site-specific standards and assessment locations.
 *Copper(chronic) = See 36.6(4) for site-specific standards and assessment locations.
 *Lead(acute) = See 36.6(4) for site-specific standards and assessment locations.
 *Lead(chronic) = See 36.6(4) for site-specific standards and assessment locations.
 *Manganese(acute) = See 36.6(4) for site-specific standards and assessment locations.
 *Manganese(chronic) = See 36.6(4) for site-specific standards and assessment locations.
 *Uranium(acute) = See 36.5(3) for details.
 *Uranium(chronic) = See 36.5(3) for details.
 *Zinc(acute) = See 36.6(4) for site-specific standards and assessment locations.
 *Zinc(chronic) = See 36.6(4) for site-specific standards and assessment locations.
 *TempMod: Ammonia = Willow below Creede WWTF.

All metals are dissolved unless otherwise noted.
 T = total recoverable
 t = total
 tr = trout

D.O. = dissolved oxygen
 DM = daily maximum
 MWAT = maximum weekly average temperature
 See 36.6 for details on TVS, TVS(tr), WS, temperature standards.

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS – FOOTNOTES

- (A) Whenever a range of standards is listed and referenced to this footnote, the first number in the range is a strictly health-based value, based on the Commission's established methodology for human health-based standards. The second number in the range is a maximum contaminant level, established under the federal Safe Drinking Water Act that has been determined to be an acceptable level of this chemical in public water supplies, taking treatability and laboratory detection limits into account. Control requirements, such as discharge permit effluent limitations, shall be established using the first number in the range as the ambient water quality target, provided that no effluent limitation shall require an "end-of-pipe" discharge level more restrictive than the second number in the range. Water bodies will be considered in attainment of this standard, and not included on the Section 303(d) List, so long as the existing ambient quality does not exceed the second number in the range.
- (B) *Reserved.*
- (C) For certain site-specific temperature standards, the temperature excursions listed in Table I - Footnote 5(c) of 31.16 do not apply. Assessment of ambient-based temperature standards should be conducted in a way that represents similar conditions to those under which the criteria were developed (i.e., air, low flow, and warming event excursions should not apply). Similarly, where site-specific adjustments to the winter shoulder season have been adopted, the winter shoulder season excursion does not apply.

EXHIBIT 6
WATER QUALITY CONTROL DIVISION

DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Water Quality Control Commission

REGULATION NO. 37 - CLASSIFICATIONS AND NUMERIC STANDARDS FOR LOWER COLORADO RIVER BASIN

5 CCR 1002-37

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37.39 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; DECEMBER 10, 2018 RULEMAKING; FINAL ACTION JANUARY 14, 2019; EFFECTIVE DATE JUNE 30, 2019

The provisions of C.R.S. 25-8-202(1)(a), (b) and (2); 25-8-203; 25-8-204; and 25-8-402; provide the specific statutory authority for adoption of these regulatory amendments. The Commission also adopted in compliance with 24-4-103(4) C.R.S. the following statement of basis and purpose.

BASIS AND PURPOSE

Pursuant to the requirements in the Basic Standards (at 31.7(3)), the commission reviewed the status of temporary modifications scheduled to expire before December 31, 2020 to determine whether the temporary modifications should be modified, eliminated, or extended.

For the temporary modifications set to expire after the effective date of this hearing, the commission reviewed progress toward resolving the uncertainty in the underlying standard and/or the extent to which conditions are a result of natural or anthropogenic conditions, and evaluated whether the temporary modifications were still necessary. The commission took no action on the following temporary modifications:

Lower Colorado Segment 4e: temporary modification of the acute and chronic copper standards (expires 12/31/2020). Tri-State Generation and Transmission Association, Inc. continues to make progress to resolve the uncertainty and is working to develop a proposal for the June 2019 Regulation No. 37 rulemaking hearing. The commission made no change to the expiration date, as the original time allotment was deemed adequate to resolve the uncertainty.

The commission deleted the temporary modifications on the following segments:

Lower Yampa Segment 17a: temporary modification of the chronic arsenic standard (expires 12/31/2021). The commission deleted this temporary modification because it was adopted in error. The temporary modification is more stringent than the underlying standard.

**COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
WATER QUALITY CONTROL COMMISSION**

5 CCR 1002-37

**REGULATION NO. 37
CLASSIFICATIONS AND NUMERIC STANDARDS
FOR
LOWER COLORADO RIVER BASIN**

**APPENDIX 37-1
Stream Classifications and Water Quality Standards Tables**

Effective 06/30/~~2018~~2019

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Yampa/Green River

17a. All tributaries to the Little Snake River from its first crossing of the Colorado/Wyoming border to a point immediately below the confluence with Fourmile Creek, except for the specific listing in Segment 18.

COLCLY17A	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute	chronic		
Reviewable	Aq Life Cold 1 Recreation P	Temperature °C	CS-II	CS-II	Aluminum	---	---
			acute	chronic	Arsenic	340	---
Qualifiers:		D.O. (mg/L)	---	6.0	Arsenic(T)	---	7.6
Other:		D.O. (spawning)	---	7.0	Beryllium	---	---
Temporary Modification(s):		pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS
Arsenic(chronic) = hybrid		chlorophyll a (mg/m2)	---	150	Chromium III	TVS	TVS
Expiration Date of 12/31/2021		E. Coli (per 100 mL)	---	205	Chromium III(T)	---	100
					Chromium VI	TVS	TVS
		Inorganic (mg/L)			Copper	TVS	TVS
			acute	chronic	Iron(T)	---	1000
		Ammonia	TVS	TVS	Lead	TVS	TVS
		Boron	---	0.75	Manganese	TVS	TVS
		Chloride	---	---	Mercury	---	0.01(t)
		Chlorine	0.019	0.011	Molybdenum(T)	---	160
		Cyanide	0.005	---	Nickel	TVS	TVS
		Nitrate	100	---	Selenium	TVS	TVS
		Nitrite	---	0.05	Silver	TVS	TVS(tr)
		Phosphorus	---	0.11	Uranium	---	---
		Sulfate	---	---	Zinc	TVS	TVS
		Sulfide	---	0.002			

All metals are dissolved unless otherwise noted.
T = total recoverable
t = total
tr = trout
sc = sculpin

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 37.6 for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Colorado River

4e. Mainstem of Dry Creek including all tributaries and wetlands from the source to immediately above the Last Chance Ditch.							
COLCLC04E	Classifications	Physical and Biological			Metals (ug/L)		
Designation			DM	MWAT	acute	chronic	
UP	Agriculture Aq Life Cold 2 Recreation N	Temperature °C	CS-II	CS-II	Aluminum	---	---
			acute	chronic	Arsenic	340	---
Qualifiers:		D.O. (mg/L)	---	5.0	Arsenic(T)	---	100
Other:		pH	6.5 - 9.0	---	Beryllium	---	---
Temporary Modification(s):		chlorophyll a (mg/m2)	---	---	Cadmium	TVS	TVS
Copper(ac/ch) = current conditions		E. Coli (per 100 mL)	---	630	Chromium III	TVS	TVS
Expiration Date of 12/31/2019		Inorganic (mg/L)			Chromium III(T)	---	100
			acute	chronic	Chromium VI	TVS	TVS
*Phosphorus(chronic) = applies only above the facilities listed at 37.5(4).		Ammonia	TVS	TVS	Copper	TVS	TVS
Iron(T)(chronic) = 3500(T) ug/L on unnamed tributary		Boron	---	0.75	Iron(T)	---	varies
and 5900(T) ug/L on Dry Creek, see section 37.6(4)(c) for iron assessment locations.		Chloride	---	---	Lead	TVS	TVS
		Chlorine	0.019	0.011	Manganese	TVS	TVS
		Cyanide	0.005	---	Mercury	---	0.01(t)
		Nitrate	100	---	Molybdenum(T)	---	160
		Nitrite	---	0.05	Nickel	TVS	TVS
		Phosphorus	---	0.11*	Selenium	TVS	TVS
		Sulfate	---	---	Silver	TVS	TVS
		Sulfide	---	0.002	Uranium	---	---
					Zinc	TVS	TVS

All metals are dissolved unless otherwise noted.
T = total recoverable
t = total
tr = trout
sc = sculpin

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 37.6 for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS – FOOTNOTES

- (A) Whenever a range of standards is listed and referenced to this footnote, the first number in the range is a strictly health-based value, based on the Commission's established methodology for human health-based standards. The second number in the range is a maximum contaminant level, established under the federal Safe Drinking Water Act that has been determined to be an acceptable level of this chemical in public water supplies, taking treatability and laboratory detection limits into account. Control requirements, such as discharge permit effluent limitations, shall be established using the first number in the range as the ambient water quality target, provided that no effluent limitation shall require an "end-of-pipe" discharge level more restrictive than the second number in the range. Water bodies will be considered in attainment of this standard, and not included on the Section 303(d) List, so long as the existing ambient quality does not exceed the second number in the range.

- (B) Assessment of adequate refuge shall rely on the Cold Large Lake table value temperature criterion and applicable dissolved oxygen standard rather than the site-specific temperature standard.

EXHIBIT 7
WATER QUALITY CONTROL DIVISION

DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Water Quality Control Commission

REGULATION NO. 38 - CLASSIFICATIONS AND NUMERIC STANDARDS FOR SOUTH PLATTE RIVER BASIN, LARAMIE RIVER BASIN, REPUBLICAN RIVER BASIN, SMOKY HILL RIVER BASIN

5 CCR 1002-38

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38.98 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; DECEMBER 10, 2018 RULEMAKING; FINAL ACTION JANUARY 14, 2019; EFFECTIVE DATE JUNE 30, 2019

The provisions of C.R.S. 25-8-202(1)(a), (b) and (2); 25-8-203; 25-8-204; and 25-8-402; provide the specific statutory authority for adoption of these regulatory amendments. The commission also adopted in compliance with 24-4-103(4) C.R.S. the following statement of basis and purpose.

BASIS AND PURPOSE

Pursuant to the requirements in the Basic Standards (at 31.7(3)), the commission reviewed the status of temporary modifications scheduled to expire before December 31, 2020 to determine whether the temporary modifications should be modified, eliminated, or extended.

For the temporary modifications set to expire after the effective date of this hearing, the commission reviewed progress toward resolving the uncertainty in the underlying standard and/or the extent to which conditions are a result of natural or anthropogenic conditions, and evaluated whether the temporary modifications were still necessary. The commission took no action on the following temporary modifications:

Upper South Platte Segment 10a: temporary modification of the temperature standards (expires 12/31/2020). Plum Creek Water Reclamation Authority continues to make progress to resolve the uncertainty. The commission made no change to the expiration date, as the original time allotment was deemed adequate to resolve the uncertainty.

Upper South Platte Segment 14: temporary modifications of the chloride and temperature standards (expire 12/31/2020). Centennial Water and Sanitation District continues to make progress to resolve the uncertainty in the chloride standard. Centennial and South Platte Water Renewal Partners (formerly Littleton/Englewood) continue to make progress to resolve the uncertainty in the temperature standard. The commission made no change to the expiration dates, as the original time allotment was deemed adequate to resolve the uncertainty.

Upper South Platte Segment 15: temporary modifications of the chloride, sulfate, and temperature standards (expire 12/31/2020). Public Service Company of Colorado continues to make progress to resolve the uncertainty in the chloride and sulfate standards. Metro Wastewater Reclamation District continues to make progress to resolve the uncertainty in the

temperature standard. The commission made no change to the expiration dates, as the original time allotment was deemed adequate to resolve the uncertainty.

Upper South Platte Segment 16g: temporary modification of the temperature standards (expires 12/31/2020). Centennial continues to make progress to resolve the uncertainty in the temperature standard. The commission made no change to the expiration date, as the original time allotment was deemed adequate to resolve the uncertainty.

Bear Creek Segment 1c: temporary modifications of the chlorophyll a and phosphorus standards (12/31/2020). The division is currently working on a model intended to resolve uncertainty in the standards and inform TMDL development. The commission made no change to the expiration date, as the original time allotment was deemed adequate to resolve the uncertainty.

Clear Creek Segment 2a: temporary modification of the acute and chronic zinc standards (expires 7/1/2020). Georgetown continues to make progress to resolve the uncertainty. The commission made no change to the expiration date, as the original time allotment was deemed adequate to resolve the uncertainty.

Clear Creek Segment 2c: temporary modifications of the chronic copper and chronic cadmium standards (expire 7/1/2020). Central Clear Creek Sanitation District continues to make progress to resolve the uncertainty. The commission made no change to the expiration date, as the original time allotment was deemed adequate to resolve the uncertainty.

Clear Creek Segment 13b: temporary modification of the temperature standards (expires 12/31/2020). City of Black Hawk / Black Hawk Central City Sanitation District continues to make progress to resolve the uncertainty. The commission made no change to the expiration date, as the original time allotment was deemed adequate to resolve the uncertainty.

Boulder Creek Segment 9: temporary modification of the acute and chronic temperature standards (expires 12/31/2020). The City of Boulder continues to make progress to resolve the uncertainty. The commission made no change to the expiration date, as the original time allotment was deemed adequate to resolve the uncertainty.

St. Vrain segments 6 and 7: temporary modifications of the chronic iron and acute and chronic manganese standards (expire 12/31/2020). Raytheon Boulder continues to make progress to resolve the uncertainty. The commission made no change to the expiration date, as the original time allotment was deemed adequate to resolve the uncertainty.

Big Thompson Segment 9: temporary modification of the chronic selenium standard (expires 12/31/2020). The Town of Milliken continues to make progress to resolve the uncertainty. The commission made no change to the expiration date, as the original time allotment was deemed adequate to resolve the uncertainty.

Cache la Poudre Segment 11: temporary modification of the acute and chronic temperature standards (expires 12/31/2020). The City of Fort Collins continues to make progress to resolve the uncertainty. The commission made no change to the expiration date, as the original time allotment was deemed adequate to resolve the uncertainty.

Cache la Poudre Segment 12: temporary modification of the acute and chronic temperature standards (expires 12/31/2020). The City of Fort Collins and the City of Greeley continue to make progress to resolve the uncertainty. The commission made no change to the expiration date, as the original time allotment was deemed adequate to resolve the uncertainty.

The commission deleted the temporary modifications on the following segments:

Cherry Creek Segment 1: temporary modification of the chronic copper standard (expires 12/31/2020). The commission deleted this temporary modification because progress was not being made on the plan to resolve uncertainty and alternative regulatory tools are available to dischargers with copper compliance concerns.

Cherry Creek Segment 3: temporary modification of the chronic arsenic standard (expires 12/31/2021). The commission deleted this temporary modification because it was adopted in error. The temporary modification is more stringent than the underlying standard.

Boulder Creek Segment 7b: temporary modification of the chronic arsenic standard (expires 12/31/2021). The commission deleted this temporary modification because it was adopted in error. The temporary modification is more stringent than the underlying standard.

Boulder Creek Segment 8: temporary modification of the chronic selenium standard (expires 12/31/2020). The commission deleted this temporary modification because progress was not being made on the plan to resolve uncertainty and alternative regulatory tools are available to dischargers with selenium compliance concerns.

Big Thompson Segment 4b: temporary modification of the chronic selenium standard (expires 12/31/2020). The commission deleted this temporary modification because progress was not being made on the plan to resolve uncertainty and alternative regulatory tools are available to dischargers with selenium compliance concerns.

Cache la Poudre Segment 13b: temporary modification of the chronic selenium standard (expires 12/31/2020). The commission deleted this temporary modification because progress was not being made on the plan to resolve uncertainty and alternative regulatory tools are available to dischargers with selenium compliance concerns.

The commission took no action on temporary modifications that were set to expire on or before the effective date of this hearing. The commission deleted the following temporary modifications, which were allowed to expire:

Upper South Platte Segment 10a (copper and manganese)
Clear Creek segments 11, 14a, 14b and 15 (temperature)

Clear Creek Segment 13b (cadmium).

**COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
WATER QUALITY CONTROL COMMISSION**

5 CCR 1002-38

**REGULATION NO. 38
CLASSIFICATIONS AND NUMERIC STANDARDS
FOR
SOUTH PLATTE RIVER BASIN, LARAMIE RIVER BASIN
REPUBLICAN RIVER BASIN, SMOKY HILL RIVER BASIN**

**APPENDIX 38-1
Stream Classifications and Water Quality Standards Tables**

Effective 06/30/~~2018~~2019

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Upper South Platte River Basin

10a. Mainstems of East Plum Creek, West Plum Creek, and Plum Creek from the boundary of National Forest lands to Chatfield Reservoir, mainstems of Stark Creek and Gove Creek from the boundary of National Forest lands to their confluence.							
COSPUS10A	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture		DM	MWAT			
Reviewable	Aq Life Warm 1 Recreation E Water Supply	Temperature °C	WS-I	WS-I	Aluminum	---	---
Qualifiers:		D.O. (mg/L)	acute	chronic	Arsenic	340	---
Other:		pH	6.5 - 9.0	---	Arsenic(T)	---	0.02
Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2021 Copper(ac/ch) = current condition* Expiration Date of 12/31/2018 Manganese(chronic) = current condition* Expiration Date of 6/30/2019 temperature(DM/MWAT) = current condition* 12/1 - 2/29 Expiration Date of 12/31/2020 *chlorophyll a (mg/m2)(chronic) = applies only above the facilities listed at 38.5(4). *Phosphorus(chronic) = applies only above the facilities listed at 38.5(4). *TempMod: Copper = East Plum Creek and Plum Creek below the PCWRA discharge. *TempMod: Manganese = applies to the manganese WS standard. *TempMod: temperature(12/1 - 2/29) = East Plum Creek and Plum Creek below the PCWRA discharge.		chlorophyll a (mg/m2)	---	150*	Cadmium	TVS	TVS
		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0	---
		Inorganic (mg/L)			Chromium III	---	TVS
			acute	chronic	Chromium III(T)	50	---
		Ammonia	TVS	TVS	Chromium VI	TVS	TVS
		Boron	---	0.75	Copper	TVS	TVS
		Chloride	---	250	Iron	---	WS
		Chlorine	0.019	0.011	Iron(T)	---	1000
		Cyanide	0.005	---	Lead	TVS	TVS
		Nitrate	10	---	Lead(T)	50	---
		Nitrite	---	0.5	Manganese	TVS	TVS/WS
		Phosphorus	---	0.17*	Mercury	---	0.01(t)
		Sulfate	---	WS	Molybdenum(T)	---	150
		Sulfide	---	0.002	Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	---	---
					Zinc	TVS	TVS

All metals are dissolved unless otherwise noted.
T = total recoverable
t = total
tr = trout

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for details on TVS, TVS(tr), WS, temperature standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Upper South Platte River Basin

14. Mainstem of the South Platte River from the outlet of Chatfield Reservoir to the Burlington Ditch diversion in Denver, Colorado.							
COSPUS14	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture		DM	MWAT		acute	chronic
Reviewable	Aq Life Warm 1 Recreation E Water Supply	Temperature °C	WS-I*	WS-I*	Aluminum	---	---
			acute	chronic	Arsenic	340	---
		D.O. (mg/L)	---	5.0	Arsenic(T)	---	0.02
Qualifiers:		pH	6.5 - 9.0	---	Beryllium	---	---
Other:		chlorophyll a (mg/m2)	---	---	Cadmium	TVS	TVS
Temporary Modification(s):		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0	---
Arsenic(chronic) = hybrid		Inorganic (mg/L)			Chromium III	---	TVS
Expiration Date of 12/31/2021			acute	chronic	Chromium III(T)	50	---
Chloride(chronic) = current condition	12/1 - 2/13	Ammonia	TVS	TVS	Chromium VI	TVS	TVS
temperature(DM/MWAT) = current condition		Boron	---	0.75	Copper	---	TVS*
Expiration Date of 12/31/2020		Chloride	---	250	Copper	TVS*	---
*Copper(acute) = Copper BLM-based FMB		Chlorine	0.019	0.011	Iron	---	WS
Cu FMB(ac)=31.5 ug/l		Cyanide	0.005	---	Iron(T)	---	1000
downstream of Marcy Gulch.		Nitrate	10	---	Lead	TVS	TVS
*Copper(chronic) = Copper BLM-based FMB		Nitrite	---	0.5	Lead(T)	50	---
Cu FMB(ch)=20.8 ug/l		Phosphorus	---	---	Manganese	TVS	TVS/190
downstream of Marcy Gulch.		Sulfate	---	WS	Mercury	---	0.01(t)
*Temperature = summer criteria apply from 2/14 - 11/30		Sulfide	---	0.002	Molybdenum(T)	---	150
					Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	---	---
					Zinc	TVS	TVS

All metals are dissolved unless otherwise noted.
T = total recoverable
t = total
tr = trout

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for details on TVS, TVS(tr), WS, temperature standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Upper South Platte River Basin

15. Mainstem of the South Platte River from the Burlington Ditch diversion in Denver, Colorado, to a point immediately below the confluence with Big Dry Creek.						
COSPLUS15	Classifications	Physical and Biological			Metals (ug/L)	
Designation		DM	MWAT		acute	chronic
UP	Agriculture	WS-I	WS-I	Aluminum	---	---
	Aq Life Warm 2			Arsenic	340	---
	Recreation E	acute	chronic	Arsenic(T)	---	0.02-10 ^A
	Water Supply	varies*	varies*	Beryllium	---	---
Qualifiers:		pH	6.0-9.0*	Cadmium	TVS	TVS
Other:		pH	6.5 - 9.0	Cadmium(T)	5.0	---
Temporary Modification(s):		chlorophyll a (mg/m2)	---	Chromium III	---	TVS
Chloride(chronic) = current condition		E. Coli (per 100 mL)	---	Chromium III(T)	50	---
Sulfate(chronic) = current condition			126	Chromium VI	TVS	TVS
temperature(DM/MWAT) = current condition		Inorganic (mg/L)		Copper	---	TVS*
Expiration Date of 12/31/2020				Copper	TVS*	---
Discharger Specific Variance(s):		Ammonia	TVS*	Iron	---	WS
Selenium(acute) = TVS: no limit		Boron	---	Iron(T)	---	1000
Selenium(chronic) = TVS: 24 µg/L		Chloride	---	Lead	TVS	TVS
Expiration Date of 12/31/2023		Chlorine	0.019	Lead(T)	50	---
*Ammonia(acute) = See attached table for site-specific standards.		Cyanide	0.005	Manganese	TVS	TVS/400
*Ammonia(chronic) = See attached table for site-specific standards.		Nitrate	10	Mercury	---	0.01(t)
*Copper(acute) = Copper BLM-based FMB		Nitrite	---	Molybdenum(T)	---	150
Cu FMB(ac)=35.1 ug/l		Phosphorus	---	Nickel	TVS	TVS
Downstream of the Metro Hite WWTF outfall.		Sulfate	---	Nickel(T)	---	100
*Copper(chronic) = Copper BLM-based FMB		Sulfide	---	Selenium	TVS	TVS
Cu FMB(ch)= 23.5 ug/l			0.002	Silver	TVS	TVS
Downstream of the Metro Hite WWTF outfall.				Uranium	---	---
*D.O. (mg/L)(acute) = See attached table for site-specific standards.				Zinc	TVS	TVS
*D.O. (mg/L)(chronic) = See attached table for site-specific standards.						
*pH(acute) = 6.0 - 9.0 from 64th Ave. downstream 2 miles						
*Variance: Selenium = see 38.6(6) for details.						

All metals are dissolved unless otherwise noted.
 T = total recoverable
 t = total
 tr = trout

D.O. = dissolved oxygen
 DM = daily maximum
 MWAT = maximum weekly average temperature
 See 38.6 for details on TVS, TVS(tr), WS, temperature standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Upper South Platte River Basin

16g. Marcy Gulch, including all wetlands from the source to the confluence with the South Platte.							
COSPUS16G	Classifications	Physical and Biological			Metals (ug/L)		
Designation			DM	MWAT			
UP	Agriculture Aq Life Warm 2 Recreation E	Temperature °C	WS-II	WS-II	Aluminum	acute	chronic
Qualifiers:			acute	chronic	Arsenic	340	---
Other:		D.O. (mg/L)	---	5.0	Arsenic(T)	---	100
Temporary Modification(s):		pH	6.5 - 9.0	---	Beryllium	---	---
temperature(DM/MWAT) = current condition*	12/1 - 2/29	chlorophyll a (mg/m2)	---	---	Cadmium	TVS	TVS
Expiration Date of 12/31/2020		E. Coli (per 100 mL)	---	126	Chromium III	TVS	TVS
*Copper(acute) = Copper BLM-based FMB Cu FMB(ac)=67.1 ug/l below the Centennial WWTF.		Inorganic (mg/L)			Chromium III(T)	---	100
*Copper(chronic) = Copper BLM-based FMB Cu FMB(ch)=43.3 ug/l below the Centennial WWTF.			acute	chronic	Chromium VI	TVS	TVS
Selenium(acute) = See section 38.6(4)(b) for assessment locations.		Ammonia	TVS	TVS	Copper	---	TVS
Selenium(chronic) = See section 38.6(4)(b) for assessment locations.		Boron	---	0.75	Copper	TVS	---
*TempMod: temperature(12/1 - 2/29) = downstream of Centennial WWTF		Chloride	---	---	Iron(T)	---	1000
		Chlorine	0.019	0.011	Lead	TVS	TVS
		Cyanide	0.005	---	Manganese	TVS	TVS
		Nitrate	100	---	Mercury	---	0.01(t)
		Nitrite	---	0.5	Molybdenum(T)	---	---
		Phosphorus	---	---	Nickel	TVS	TVS
		Sulfate	---	---	Selenium	21*	13*
		Sulfide	---	0.002	Silver	TVS	TVS
					Uranium	---	---
					Zinc	TVS	TVS

All metals are dissolved unless otherwise noted.
 T = total recoverable
 t = total
 tr = trout

D.O. = dissolved oxygen
 DM = daily maximum
 MWAT = maximum weekly average temperature
 See 38.6 for details on TVS, TVS(tr), WS, temperature standards.

UPPER SOUTH PLATTE RIVER SEGMENT 15

Site-Specific Minimum Dissolved Oxygen and Ammonia Standards

UNDERLYING STANDARDS

Dissolved Oxygen

Early Life Stage Protection Period (April 1 through July 31)

1-Day^{1,5,6} 3.0 mg/L (acute)

7-Day Average^{1,2,4} 5.0 mg/L

Older Life Stage Protection Period (August 1 through March 31)

1-Day^{1,5} 2.0 mg/L (acute)

7-Day Mean of Minimums^{1,3} 2.5 mg/L

30-Day Average^{1,2} 4.5 mg/L

TEMPORARY MODIFICATION

During the period until October 31, 2001, the Segment 15 dissolved oxygen standards from 88th Avenue north to the end of the Segment shall be the currently existing ambient conditions as monitored in 1992, 1993, and 1994 by the Division and by the Metro District. Beginning November 1, 2001, the standards shall apply to all sections of Segment 15 south of the Brighton Ditch diversion. The standards north of the Brighton Ditch diversion shall continue to be the ambient conditions existing in 1992, 1993, and 1994. Beginning November 1, 2004, the standards shall apply to all sections of Segment 15.

Refer to Section 38(6)(4)(c) for Dissolved Oxygen assessment locations.

Footnotes

1. For the purposes of determining compliance with the standards, dissolved oxygen measurements shall only be taken in the flowing portion of the stream at mid-depth, and at least six inches above the bottom of the channel. All sampling protocols and test procedures shall be in accordance with procedures and protocols approved by the Division.

2. A minimum of four independent daily means must be used to calculate the average for the 7-Day Average standard. A minimum of eight independent daily means must be used to calculate the average for the 30-Day Average standard. The four days and the eight days must be representative of the 7-Day and the 30-Day periods respectively. The daily means shall be the mean of the daily high and low values. In calculating the mean values, the dissolved oxygen saturation value shall be used in place of any dissolved oxygen measurements which exceed saturation.
3. The 7-Day Mean minimum is the average of the daily minimums measured at the location on each day during any 7-Day period.
4. North of the Lupton Bottoms Ditch diversion, the ELS 7-Day average standards for the period July 1 – June 31 shall be 4.6 mg/L.
5. During a 24 hour day dissolved oxygen levels are likely to be lower during the nighttime when there is no photosynthesis. The dissolved oxygen levels should not drop below the acute standard (ELS acute standard of 3.0 mg/L or the OLS standards of 2.0 mg/L). However, if during the ELS period multiple measurements are below 3.0 mg/L during the same nighttime period, the multiple measurements shall be considered a single exceedance of the acute standard. For measurements below 2.0 mg/L during either the ELS or the OLS periods, each hourly measurement below 2.0 mg/L shall be considered an exceedance of the acute standards.
6. In July, the dissolved oxygen level in Segment 15 may be lower than the 3.0 mg/L acute standard for up to 14 exceedances in any one year and up to a total of 21 exceedances in three years before there is a determination that the acute dissolved oxygen standards is not being met. Exceedances shall be counted as described in Footnote 5.

Ammonia:

Early Life Stage Protection Period (April 1 through July 31)

Ammonia

Warm Water = (mg/l as N)Total

$$acute = \frac{0.411}{1 + 10^{7.204 - pH}} + \frac{58.4}{1 + 10^{pH - 7.204}}$$

$$chronic (Apr1 - July31) = \left(\frac{0.0577}{1 + 10^{7.688 - pH}} + \frac{2.487}{1 + 10^{pH - 7.688}} \right) * MIN \left(2.85, 1.45 * 10^{0.028(25 - T)} \right)$$

$$chronic (Aug 1 - Mar 31) = \left(\frac{0.0577}{1 + 10^{7.688 - pH}} + \frac{2.487}{1 + 10^{pH - 7.688}} \right) * 1.45 * 10^{0.028 * (25 - MAX(T, 7))}$$

NH₃ = old TVS

Warm Water Acute = 0.62/FT/FPH/2^(4 old) in mg/ (N)

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Cherry Creek Basin

1. Mainstem of Cherry Creek from the source of East and West Cherry Creek to the inlet of Cherry Creek Reservoir.							
COSPCH01	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute	chronic		
Reviewable	Aq Life Warm 2	Temperature °C	WS-II	WS-II	Aluminum	---	---
	Recreation E		acute	chronic	Arsenic	340	---
	Water Supply	D.O. (mg/L)	---	5.0	Arsenic(T)	---	0.02-10 ^A
Qualifiers:		pH	6.5 - 9.0	---	Beryllium	---	---
Other:		chlorophyll a (mg/m2)	---	150*	Cadmium	TVS	TVS
Temporary Modification(s):		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0	---
Copper(ac/ch) = current condition*		Inorganic (mg/L)			Chromium III	---	TVS
Expiration Date of 12/31/2020			acute	chronic	Chromium III(T)	50	---
*chlorophyll a (mg/m2)(chronic) = applies only above the facilities listed at 38.5(4).		Ammonia	TVS	TVS	Chromium VI	TVS	TVS
*Phosphorus(chronic) = effective 12/31/2020.		Boron	---	0.75	Copper	TVS	TVS
Applies only above the facilities listed at 38.5(4).		Chloride	---	250	Iron	---	WS
*TempMod- Copper = below the PWSD WWTF outfall.		Chlorine	0.019	0.011	Iron(T)	---	1000
		Cyanide	0.005	---	Lead	TVS	TVS
		Nitrate	10	---	Lead(T)	50	---
		Nitrite	---	0.5	Manganese	TVS	TVS/WS
		Phosphorus	---	0.17*	Mercury	---	0.01(t)
		Sulfate	---	WS	Molybdenum(T)	---	150
		Sulfide	---	0.002	Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	---	---
					Zinc	TVS	TVS

3. Mainstem of Cherry Creek from the outlet of Cherry Creek Reservoir to the confluence with the South Platte River.							
COSPCH03	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute	chronic		
Reviewable	Aq Life Warm 2	Temperature °C	WS-II	WS-II	Aluminum	---	---
	Recreation E		acute	chronic	Arsenic	340	---
	Water Supply	D.O. (mg/L)	---	5.0	Arsenic(T)	---	0.02-10 ^A
Qualifiers:		pH	6.5 - 9.0	---	Beryllium	---	---
Other:		chlorophyll a (mg/m2)	---	---	Cadmium	TVS	TVS
Temporary Modification(s):		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0	---
Arsenic(chronic) = hybrid		Inorganic (mg/L)			Chromium III	---	TVS
Expiration Date of 12/31/2021			acute	chronic	Chromium III(T)	50	---
Ammonia		TVS	TVS	TVS	Chromium VI	TVS	TVS
Boron		---	0.75	0.75	Copper	TVS	TVS
Chloride		---	250	250	Iron	---	WS
Chlorine		0.019	0.011	0.011	Iron(T)	---	1000
Cyanide		0.005	---	---	Lead	TVS	TVS
Nitrate		10	---	---	Lead(T)	50	---
Nitrite		---	0.5	0.5	Manganese	TVS	TVS/WS
Phosphorus		---	---	---	Mercury	---	0.01(t)
Sulfate		---	WS	WS	Molybdenum(T)	---	150
Sulfide		---	0.002	0.002	Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	---	---
					Zinc	TVS	TVS

All metals are dissolved unless otherwise noted.
T = total recoverable
t = total
tr = trout

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for details on TVS, TVS(tr), WS, temperature standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Bear Creek Basin

1c. Bear Creek Reservoir.								
COSPBE01C	Classifications	Physical and Biological			Metals (ug/L)			
Designation			DM	MWAT				
Reviewable		Temperature °C	1/1 - 3/31	CLL	CLL	Aluminum	acute	chronic
	Agriculture					---	---	---
	Aq Life Cold 1	Temperature °C	4/1 - 12/31	CLL	23.3	Arsenic	340	---
	Recreation E					Arsenic(T)	---	0.02
	Water Supply					Beryllium	---	---
Qualifiers:							acute	chronic
Other:		D.O. (mg/L)				Cadmium	TVS(tr)	TVS
Temporary Modification(s):		D.O. (spawning)				Cadmium(T)	5.0	---
Arsenic(chronic) = hybrid		pH	6.5 - 9.0			Chromium III	---	TVS
Expiration Date of 12/31/2021		chlorophyll a (ug/L)	7/1 - 9/30		12.2*	Chromium III(T)	50	---
chlorophyll a (ug/L)(chronic) = current condition		E. Coli (per 100 mL)			126	Chromium VI	TVS	TVS
Phosphorus(chronic) = current condition		Inorganic (mg/L)				Copper	TVS	TVS
Expiration Date of 12/31/2020			acute	chronic		Iron	---	WS
*chlorophyll a (ug/L)(chronic) = mean concentration measured through collection of samples that are representative of the mixed layer during summer months (July, August, September) and with an exceedance frequency of once in five years.		Ammonia	TVS	TVS		Iron(T)	---	1000
*Phosphorus(chronic) = mean concentration measured through collection of samples that are representative of the mixed layer during summer months (July, August, September) and with an exceedance frequency of once in five years.		Boron	---	0.75		Lead	TVS	TVS
		Chloride	---	250		Lead(T)	50	---
		Chlorine	0.019	0.011		Manganese	TVS	TVS/WS
		Cyanide	0.005	---		Mercury	---	0.01(t)
		Nitrate	10	---		Molybdenum(T)	---	150
		Nitrite	---	0.05		Nickel	TVS	TVS
		Phosphorus	7/1 - 9/30	---	22.2*	Nickel(T)	---	100
		Sulfate	---	WS		Selenium	TVS	TVS
		Sulfide	---	0.002		Silver	TVS	TVS(tr)
						Uranium	---	---
						Zinc	TVS	TVS

All metals are dissolved unless otherwise noted.
T = total recoverable
t = total
tr = trout

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for details on TVS, TVS(tr), WS, temperature standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Clear Creek Basin

2a. Mainstem of Clear Creek, including all tributaries and wetlands, from the I-70 bridge above Silver Plume to a point just above the confluence with West Fork Clear Creek, except for specific listings in Segments 3a and 3b.						
COSPCL02A	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	acute chronic		
Reviewable*	Aq Life Cold 1	Temperature °C	CS-I	CS-I	Aluminum	---
	Recreation E	acute	chronic	Arsenic	340	---
	Water Supply	D.O. (mg/L)	---	6.0	Arsenic(T)	---
Qualifiers:		D.O. (spawning)	---	7.0	Beryllium	---
Other:		pH	6.5 - 9.0	---	Cadmium	TVS(tr)
Temporary Modification(s):		chlorophyll a (mg/m2)	---	150*	Cadmium(T)	5.0
Arsenic(chronic) = hybrid		E. Coli (per 100 mL)	---	126	Chromium III	---
Expiration Date of 12/31/2021		Inorganic (mg/L)			Chromium III(T)	50
Zinc(chronic) = 353		acute	chronic	Chromium VI	TVS	TVS
Zinc(acute) = 586		Ammonia	TVS	TVS	Copper	TVS
Expiration Date of 7/1/2020		Boron	---	0.75	Iron	---
*chlorophyll a (mg/m2)(chronic) = applies only above the facilities listed at 38.5(4).		Chloride	---	250	Iron(T)	---
*Designation: 9/30/00 Baseline does not apply		Chlorine	0.019	0.011	Lead	TVS
*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).		Cyanide	0.005	---	Lead(T)	50
*Zinc(acute) = $0.978e^{(0.8537[\ln(\text{hardness})]+1.9467)}$		Nitrate	10	---	Manganese	TVS
*Zinc(chronic) = $0.986e^{(0.8537[\ln(\text{hardness})]+1.8032)}$		Nitrite	---	0.05	Mercury	---
		Phosphorus	---	0.11*	Molybdenum(T)	---
		Sulfate	---	WS	Nickel	TVS
		Sulfide	---	0.002	Nickel(T)	---
					Selenium	TVS
					Silver	TVS
					Uranium	---
					Zinc	---
					Zinc	SSE*
					Zinc	SSE*

All metals are dissolved unless otherwise noted.
T = total recoverable
t = total
tr = trout

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for details on TVS, TVS(tr), WS, temperature standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Clear Creek Basin

2c. Mainstem of Clear Creek, including all tributaries and wetlands, from a point just below the confluence with Mill Creek to a point just above the Argo Tunnel discharge, except for specific listings in Segments 9a, 9b, and 10.							
COSPCL02C	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute		chronic	
Reviewable*	Aq Life Cold 1	Temperature °C	CS-I	CS-I	Aluminum	---	
	Recreation E	acute	chronic	Arsenic	340	---	
	Water Supply	D.O. (mg/L)	---	6.0	Arsenic(T)	---	
Qualifiers:		D.O. (spawning)	---	7.0	Beryllium	---	
Other:		pH	6.5 - 9.0	---	Cadmium	TVS(tr)	
Temporary Modification(s):		chlorophyll a (mg/m2)	---	150*	Cadmium(T)	5.0	
Arsenic(chronic) = hybrid		E. Coli (per 100 mL)	---	126	Chromium III	---	
Expiration Date of 12/31/2021		Inorganic (mg/L)			Chromium III(T)	50	---
Cadmium(chronic) = current condition		acute	chronic	Chromium VI	TVS	TVS	
Copper(chronic) = current condition		Ammonia	TVS	TVS	Copper	TVS	
Expiration Date of 7/1/2020		Boron	---	0.75	Iron	---	
*chlorophyll a (mg/m2)(chronic) = applies only above the facilities listed at 38.5(4).		Chloride	---	250	Iron(T)	---	
*Designation: 9/30/00 Baseline does not apply		Chlorine	0.019	0.011	Lead	TVS	
*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).		Cyanide	0.005	---	Lead(T)	50	
*Zinc(acute) = $0.978e^{(0.8537[\ln(\text{hardness})]+1.9467)}$		Nitrate	10	---	Manganese	TVS	
*Zinc(chronic) = $0.986e^{(0.8537[\ln(\text{hardness})]+1.8032)}$		Nitrite	---	0.05	Mercury	---	
		Phosphorus	---	0.11*	Molybdenum(T)	---	
		Sulfate	---	WS	Nickel	TVS	
		Sulfide	---	0.002	Nickel(T)	---	
					Selenium	TVS	
					Silver	TVS	
					Uranium	---	
					Zinc	---	
					Zinc	SSE*	
					Zinc	SSE*	

All metals are dissolved unless otherwise noted.
T = total recoverable
t = total
tr = trout

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for details on TVS, TVS(tr), WS, temperature standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Clear Creek Basin

11. Mainstem of Clear Creek from a point just above the Argo Tunnel discharge to the Farmers Highline Canal diversion in Golden, Colorado.						
COSPCL11	Classifications	Physical and Biological			Metals (ug/L)	
Designation		DM	MWAT	acute	chronic	
UP	Agriculture					
	Aq Life Cold 1	Temperature °C	CS-I	CS-I	Aluminum	---
	Recreation E		acute	chronic	Arsenic	340
Water Supply		D.O. (mg/L)	---	6.0	Arsenic(T)	---
		D.O. (spawning)	---	7.0	Beryllium	---
Qualifiers:		pH	6.5 - 9.0	---	Cadmium	TVS(tr)
Other:		chlorophyll a (mg/m2)	---	---	Cadmium(T)	5.0
Temporary Modification(s):		E. Coli (per 100 mL)	---	126	Chromium III	---
Arsenic(chronic) = hybrid					Chromium III(T)	50
Expiration Date of 12/31/2021					Chromium VI	TVS
temperature(DM/MWAT) = current condition*		Inorganic (mg/L)			Copper	---
Expiration Date of 6/30/2019			acute	chronic	Iron	---
*Zinc(acute) = 0.978e^(0.8537[ln(hardness)]+1.9467)		Ammonia	TVS	TVS	Iron(T)	---
*Zinc(chronic) = 0.986e^(0.8537[ln(hardness)]+1.8032)		Boron	---	0.75	Lead	TVS
*TempMod: temperature = from a point just downstream of the US 6 Bridge to the Farmers Highline Canal diversion in Golden, Colorado.		Chloride	---	250	Lead(T)	50
		Chlorine	0.019	0.011	Manganese	TVS
		Cyanide	0.005	---	Mercury	---
		Nitrate	10	---	Molybdenum(T)	---
		Nitrite	---	0.05	Nickel	TVS
		Phosphorus	---	---	Nickel(T)	---
		Sulfate	---	WS	Selenium	TVS
		Sulfide	---	0.002	Silver	TVS
					Uranium	---
					Zinc	---
					Zinc	SSE*
						SSE*

13b. Mainstem of North Clear Creek including all tributaries and wetlands from a point just below the confluence with Chase Gulch to the confluence with Clear Creek, except for the specific listings in Segment 13a.						
COSPCL13B	Classifications	Physical and Biological			Metals (ug/L)	
Designation		DM	MWAT	acute	chronic	
UP	Agriculture					
	Aq Life Cold 2	Temperature °C	CS-I	CS-I	Aluminum	---
	Recreation E		acute	chronic	Arsenic	340
Qualifiers:		D.O. (mg/L)	---	6.0	Arsenic(T)	---
Other:		D.O. (spawning)	---	7.0	Beryllium	---
Temporary Modification(s):		pH	6.5 - 9.0	---	Cadmium	TVS(tr)
Cadmium(chronic) = 4.7		chlorophyll a (mg/m2)	---	150*	Chromium III	TVS
Expiration Date of 12/31/2018		E. Coli (per 100 mL)	---	126	Chromium III(T)	---
temperature(DM/MWAT) = current condition					Chromium VI	TVS
Expiration Date of 12/31/2020		Inorganic (mg/L)			Copper	---
*chlorophyll a (mg/m2)(chronic) = applies only above the facilities listed at 38.5(4).			acute	chronic	Iron(T)	---
*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).		Ammonia	TVS	TVS	Lead	TVS
		Boron	---	0.75	Manganese	TVS
		Chloride	---	---	Mercury	---
		Chlorine	0.019	0.011	Molybdenum(T)	---
		Cyanide	0.005	---	Nickel	TVS
		Nitrate	100	---	Selenium	TVS
		Nitrite	---	0.05	Silver	TVS
		Phosphorus	---	0.11*	Uranium	---
		Sulfate	---	---	Zinc	---
		Sulfide	---	0.002		740

All metals are dissolved unless otherwise noted.
T = total recoverable
t = total
tr = trout

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for details on TVS, TVS(tr), WS, temperature standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Clear Creek Basin

14a. Mainstem of Clear Creek from the Farmers Highline Canal diversion in Golden, Colorado to the Denver Water conduit #16 crossing.							
COSPCL14A	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture Aq Life Warm 2 Recreation N Water Supply	DM	MWAT	acute chronic			
UP		acute	chronic	Aluminum	---	---	
		---	5.0	Arsenic	340	---	
Qualifiers:	<p>Temporary Modification(s): temperature(DM/MWAT) = current condition Expiration Date of 6/30/2019</p> <p>*Zinc(acute) = TVS x (times) the FWER (final water effect ratio). Expiration date of 12/31/20. *Zinc(chronic) = TVS x (times) the FWER (final water effect ratio). Expiration date of 12/31/20.</p>	D.O. (mg/L)	---	5.0	Arsenic(T)	---	0.02-10
Other:		pH	6.5 - 9.0	---	Beryllium	---	---
<p>Temporary Modification(s): temperature(DM/MWAT) = current condition Expiration Date of 6/30/2019</p> <p>*Zinc(acute) = TVS x (times) the FWER (final water effect ratio). Expiration date of 12/31/20. *Zinc(chronic) = TVS x (times) the FWER (final water effect ratio). Expiration date of 12/31/20.</p>		Inorganic (mg/L)			Cadmium	TVS	TVS
		acute	chronic	Chromium III	---	TVS	
		---	---	Chromium III(T)	50	---	
		TVS	TVS	Chromium VI	TVS	TVS	
		---	0.75	Copper	TVS	TVS	
		---	250	Iron	---	WS	
		0.019	0.011	Iron(T)	---	1000	
		0.005	---	Lead	TVS	TVS	
		10	---	Lead(T)	50	---	
		---	0.5	Manganese	TVS	244	
		---	---	Mercury	---	0.01(t)	
		---	WS	Molybdenum(T)	---	150	
		---	0.002	Nickel	TVS	TVS	
		---	---	Nickel(T)	---	100	
		---	---	Selenium	TVS	TVS	
		---	---	Silver	TVS	TVS	
		---	---	Uranium	---	---	
		---	---	Zinc	TVSx1.57*	TVSx1.57*	

14b. Mainstem of Clear Creek from the Denver Water conduit #16 crossing to a point just below Youngfield Street in Wheat Ridge, Colorado.							
COSPCL14B	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture Aq Life Warm 2 Recreation E Water Supply	DM	MWAT	acute chronic			
UP		acute	chronic	Aluminum	---	---	
		---	5.0	Arsenic	340	---	
Qualifiers:	<p>Temporary Modification(s): temperature(DM/MWAT) = current condition Expiration Date of 6/30/2019</p> <p>*Zinc(acute) = TVS x (times) the FWER (final water effect ratio). Expiration date of 12/31/2021 *Zinc(chronic) = TVS x (times) the FWER (final water effect ratio). Expiration date of 12/31/20.</p>	D.O. (mg/L)	---	5.0	Arsenic(T)	---	0.02
Water + Fish Standards		pH	6.5 - 9.0	---	Beryllium	---	---
Other:		chlorophyll a (mg/m2)	---	---	Cadmium	TVS	TVS
<p>Temporary Modification(s): temperature(DM/MWAT) = current condition Expiration Date of 6/30/2019</p> <p>*Zinc(acute) = TVS x (times) the FWER (final water effect ratio). Expiration date of 12/31/2021 *Zinc(chronic) = TVS x (times) the FWER (final water effect ratio). Expiration date of 12/31/20.</p>		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0	---
		Inorganic (mg/L)			Chromium III	---	TVS
		acute	chronic	Chromium III(T)	50	---	
		TVS	TVS	Chromium VI	TVS	TVS	
		---	0.75	Copper	TVS	TVS	
		---	250	Iron	---	WS	
		0.019	0.011	Iron(T)	---	1000	
		0.005	---	Lead	TVS	TVS	
		10	---	Lead(T)	50	---	
		---	0.5	Manganese	TVS	244	
		---	---	Mercury	---	0.01(t)	
		---	WS	Molybdenum(T)	---	150	
		---	0.002	Nickel	TVS	TVS	
		---	---	Nickel(T)	---	100	
		---	---	Selenium	TVS	TVS	
		---	---	Silver	TVS	TVS	
		---	---	Uranium	---	---	
	---	---	Zinc	TVSx1.57*	TVSx1.57*		

All metals are dissolved unless otherwise noted.
 T = total recoverable
 t = total
 tr = trout

D.O. = dissolved oxygen
 DM = daily maximum
 MWAT = maximum weekly average temperature
 See 38.6 for details on TVS, TVS(tr), WS, temperature standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Clear Creek Basin

15. Mainstem of Clear Creek from Youngfield Street in Wheat Ridge, Colorado, to the confluence with the South Platte River.						
COSPCL15	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture		DM	MWAT		
Reviewable	Aq Life Warm 1*	Temperature °C	WS-II	WS-II	Aluminum	---
	Recreation E		acute	chronic	Arsenic	340
	Water Supply	D.O. (mg/L)	---	5.0	Arsenic(T)	---
Qualifiers:		pH	6.5 - 9.0	---	Beryllium	---
Other:		chlorophyll a (mg/m2)	---	---	Cadmium	TVS
Temporary Modification(s):		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0
Arsenic(chronic) = hybrid		Inorganic (mg/L)			Chromium III	---
Expiration Date of 12/31/2021			acute	chronic	Chromium III(T)	50
temperature(DM/MWAT) = current condition		Ammonia	TVS	TVS	Chromium VI	TVS
Expiration Date of 6/30/2019		Boron	---	0.75	Copper	TVS
*Classification: Aquatic life warm 1 goal qualifier.		Chloride	---	250	Iron	---
*Zinc(acute) = TVS x (times) the FWER (final water effect ratio).		Chlorine	0.019	0.011	Iron(T)	---
Expiration date of 12/31/20.		Cyanide	0.005	---	Lead	TVS
*Zinc(chronic) = TVS x (times) the FWER (final water effect ratio).		Nitrate	10	---	Lead(T)	50
Expiration date of 12/31/20.		Nitrite	---	0.5	Manganese	TVS
		Phosphorus	---	---	Mercury	---
		Sulfate	---	WS	Molybdenum(T)	---
		Sulfide	---	0.002	Nickel	TVS
					Nickel(T)	---
					Selenium	TVS
					Silver	TVS
					Uranium	---
					Zinc	TVSx1.57*
						TVSx1.57*

All metals are dissolved unless otherwise noted.
 T = total recoverable
 t = total
 tr = trout

D.O. = dissolved oxygen
 DM = daily maximum
 MWAT = maximum weekly average temperature
 See 38.6 for details on TVS, TVS(tr), WS, temperature standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Boulder Creek Basin

7b. Mainstem of Coal Creek from Highway 36 to the confluence with Boulder Creek.							
COSPBO07B	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute	chronic		
Reviewable	Aq Life Warm 2	Temperature °C	WS-II	WS-II	Aluminum	---	---
	Recreation E		acute	chronic	Arsenic	340	---
	Water Supply	D.O. (mg/L)	---	5.0	Arsenic(T)	---	0.02-10 ^A
Qualifiers:		pH	6.5 - 9.0	---	Beryllium	---	---
Other:		chlorophyll a (mg/m2)	---	---	Cadmium	TVS	TVS
Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2021		Inorganic (mg/L)			Cadmium(T)	5.0	---
			acute	chronic	Chromium III	---	TVS
		Ammonia	TVS	TVS	Chromium III(T)	50	---
		Boron	---	0.75	Chromium VI	TVS	TVS
		Chloride	---	250	Copper	TVS	TVS
		Chlorine	0.019	0.011	Iron	---	WS
		Cyanide	0.005	---	Iron(T)	---	1000
		Nitrate	10	---	Lead	TVS	TVS
		Nitrite	---	0.5	Lead(T)	50	---
		Phosphorus	---	---	Manganese	TVS	TVS/WS
		Sulfate	---	WS	Mercury	---	0.01(t)
		Sulfide	---	0.002	Molybdenum(T)	---	150
					Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	---	---
					Zinc	TVS	TVS
8. All tributaries to South Boulder Creek, including all wetlands from South Boulder Road to the confluence with Boulder Creek and all tributaries to Coal Creek, including all wetlands from Highway 93 to the confluence with Boulder Creek.							
COSPBO08	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute	chronic		
UP	Aq Life Warm 2	Temperature °C	WS-II	WS-II	Aluminum	---	---
	Recreation E		acute	chronic	Arsenic	340	---
Qualifiers:		D.O. (mg/L)	---	5.0	Arsenic(T)	---	100
Other:		pH	6.5 - 9.0	---	Beryllium	---	---
Temporary Modification(s): Selenium(chronic) = current condition Expiration Date of 12/31/2020 *chlorophyll a (mg/m2)(chronic) = applies only above the facilities listed at 38.5(4). *Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).		chlorophyll a (mg/m2)	---	150*	Cadmium	TVS	TVS
		E. Coli (per 100 mL)	---	126	Chromium III	TVS	TVS
		Inorganic (mg/L)			Chromium III(T)	---	100
			acute	chronic	Chromium VI	TVS	TVS
		Ammonia	TVS	TVS	Copper	TVS	TVS
		Boron	---	0.75	Iron	---	---
		Chloride	---	---	Iron(T)	---	1000
		Chlorine	0.019	0.011	Lead	TVS	TVS
		Cyanide	0.005	---	Manganese	TVS	TVS
		Nitrate	100	---	Mercury	---	0.01(t)
		Nitrite	---	0.5	Molybdenum(T)	---	150
		Phosphorus	---	0.17*	Nickel	TVS	TVS
		Sulfate	---	---	Selenium	TVS	TVS
		Sulfide	---	0.002	Silver	TVS	TVS
					Uranium	---	---
					Zinc	TVS	TVS

All metals are dissolved unless otherwise noted.
 T = total recoverable
 t = total
 tr = trout

D.O. = dissolved oxygen
 DM = daily maximum
 MWAT = maximum weekly average temperature
 See 38.6 for details on TVS, TVS(tr), WS, temperature standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Boulder Creek Basin

9. Mainstem of Boulder Creek from a point immediately above the confluence with South Boulder Creek to the confluence with Coal Creek.						
COSPBO09	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture		DM	MWAT		
Reviewable	Aq Life Warm 1	Temperature °C	WS-II	WS-II	Aluminum	---
	Recreation E		acute	chronic	Arsenic	340
	Water Supply	D.O. (mg/L)	---	5.0	Arsenic(T)	---
Qualifiers:		pH	6.5 - 9.0	---	Beryllium	---
Other:		chlorophyll a (mg/m2)	---	---	Cadmium	TVS
Temporary Modification(s):		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0
Arsenic(chronic) = hybrid		Inorganic (mg/L)			Chromium III	---
Expiration Date of 12/31/2021			acute	chronic	Chromium III(T)	50
temperature(DM/MWAT) = current condition	12/1 - 2/29	Ammonia	TVS	TVS	Chromium VI	TVS
Expiration Date of 12/31/2020		Boron	---	0.75	Copper	TVS
		Chloride	---	250	Iron	---
		Chlorine	0.019	0.011	Iron(T)	---
		Cyanide	0.005	---	Lead	TVS
		Nitrate	10	---	Lead(T)	50
		Nitrite	---	0.5	Manganese	TVS
		Phosphorus	---	---	Mercury	---
		Sulfate	---	WS	Molybdenum(T)	---
		Sulfide	---	0.002	Nickel	TVS
					Nickel(T)	---
					Selenium	TVS
					Silver	TVS
					Uranium	---
					Zinc	TVS

All metals are dissolved unless otherwise noted.
T = total recoverable
t = total
tr = trout

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for details on TVS, TVS(tr), WS, temperature standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

St. Vrain Creek Basin

6. All tributaries to St. Vrain Creek, including wetlands from Hygiene Road to the confluence with the South Platte River, except for specific listings in the Boulder Creek subbasin and in Segments 4a, 4b, 4c and 5.

COSPSV06	Classifications	Physical and Biological			Metals (ug/L)		
		DM	MWAT	acute	chronic		
UP	Agriculture						
	Aq Life Warm 2 Recreation E	Temperature °C	WS-II	WS-II	Aluminum	---	---
Qualifiers:	Other:		acute	chronic	Arsenic	340	---
		D.O. (mg/L)	---	5.0	Arsenic(T)	---	100
Temporary Modification(s): Iron(chronic) = current condition Manganese(ac/ch) = current condition Expiration Date of 12/31/2020	Other:	pH	6.5 - 9.0	---	Beryllium	---	---
		chlorophyll a (mg/m ²)	---	---	Cadmium	TVS	TVS
		E. Coli (per 100 mL)	---	126	Chromium III	TVS	TVS
		Inorganic (mg/L)			Chromium III(T)	---	100
			acute	chronic	Chromium VI	TVS	TVS
		Ammonia	TVS	TVS	Copper	TVS	TVS
		Boron	---	0.75	Iron(T)	---	1000
		Chloride	---	---	Lead	TVS	TVS
		Chlorine	0.019	0.011	Manganese	TVS	TVS
		Cyanide	0.005	---	Mercury	---	0.01(t)
		Nitrate	100	---	Molybdenum(T)	---	150
		Nitrite	---	0.5	Nickel	TVS	TVS
		Phosphorus	---	---	Selenium	TVS	TVS
		Sulfate	---	---	Silver	TVS	TVS
		Sulfide	---	0.002	Uranium	---	---
			Zinc	TVS	TVS		

7. Boulder Reservoir, Coot Lake, Left Hand Valley Reservoir and Spurgeon Reservoir.

COSPSV07	Classifications	Physical and Biological			Metals (ug/L)		
		DM	MWAT	acute	chronic		
Reviewable	Agriculture						
	Aq Life Warm 1 Recreation E Water Supply DUWS*	Temperature °C	WL	WL	Aluminum	---	---
Qualifiers:	Other:		acute	chronic	Arsenic	340	---
		D.O. (mg/L)	---	5.0	Arsenic(T)	---	0.02
Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2021 Iron(chronic) = current condition* Manganese(ac/ch) = current condition Expiration Date of 12/31/2020 *Classification: DUWS applies to Boulder, Spurgeon and Left Hand Valley Reservoirs only. *TempMod: Iron = Trec and dissolved	Other:	pH	6.5 - 9.0	---	Beryllium	---	---
		chlorophyll a (ug/L)	---	---	Cadmium	TVS	TVS
		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0	---
		Inorganic (mg/L)			Chromium III	---	TVS
			acute	chronic	Chromium III(T)	50	---
		Ammonia	TVS	TVS	Chromium VI	TVS	TVS
		Boron	---	0.75	Copper	TVS	TVS
		Chloride	---	250	Iron	---	WS
		Chlorine	0.019	0.011	Iron(T)	---	1000
		Cyanide	0.005	---	Lead	TVS	TVS
		Nitrate	10	---	Lead(T)	50	---
		Nitrite	---	0.5	Manganese	TVS	TVS/WS
		Phosphorus	---	---	Mercury	---	0.01(t)
		Sulfate	---	WS	Molybdenum(T)	---	150
		Sulfide	---	0.002	Nickel	TVS	TVS
			Nickel(T)	---	100		
			Selenium	TVS	TVS		
			Silver	TVS	TVS		
			Uranium	---	---		
			Zinc	TVS	TVS		

All metals are dissolved unless otherwise noted.
T = total recoverable
t = total
tr = trout

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for details on TVS, TVS(tr), WS, temperature standards.

Site-Specific Minimum Dissolved Oxygen and Ammonia Standards for Middle South Platte Segment 1a

Dissolved Oxygen:

STANDARDS

Early Life Stage Protection Period (April 1 through July 31)

1-Day^{1,4,5} 3.0 mg/L (acute)

7-Day Average^{1,2} 5.0 mg/L

Older Life Stage Protection Period (August 1 through March 31)

1-Day^{1,4} 2.0 mg/L (acute)

7-Day Mean of Minimums^{1,3} 2.5 mg/L

30-Day Average^{1,2} 4.5 mg/L

Refer to Section 38(6)(4)(c) for Dissolved Oxygen assessment locations.

Footnotes

1. For the purpose of determining compliance with the standards, dissolved oxygen measurements shall only be taken in the flowing portion of the stream at mid-depth, and at least six inches above the bottom of the channel. All sampling protocols and test procedures shall be in accordance with procedures and protocols approved by the Division.
2. A minimum of four independent daily means must be used to calculate the average for the 7-Day Average standard. A minimum of eight independent daily means must be used to calculate the average for the 30-Day Average standard. The four days and the eight days must be representative of the 7-Day and the 30-Day periods respectively. The daily mean shall be the mean of the daily high and low values. In calculating the mean values, the dissolved oxygen saturation value shall be used in place of any dissolved oxygen measurements which exceed saturation.
3. The 7-Day Mean Minimum is the average of the daily minimums measured at a location on each day during any 7-Day period.
4. During a 24 hour day, dissolved oxygen levels are likely to be lower during the nighttime when there is no photosynthesis. The dissolved oxygen levels should not drop below the acute standard (ELS acute standard of 3.0 mg/L or the OLS standard of 2.0 mg/L). However, if during the ELS period multiple measurements are below 3.0 mg/L during the same nighttime period, the multiple measurements shall be considered a single exceedance of the acute standard. For measurements below 2.0 mg/L during either the ELS or the OLS periods, each hourly measurement below 2.0 mg/L shall be considered an exceedance of the acute standard.
5. In July, the dissolved oxygen level in Segment 1a may be lower than the 3.0 mg/L acute standard for up to 14 exceedances in any one year and up to a total of 21 exceedances in three years before there is a determination that the acute dissolved oxygen standards is not being met. Exceedances shall be counted as described in Footnote 4.

Ammonia:

Early Life Stage Protection Period (April 1 through July 31)

Ammonia

Warm Water = (mg/l as N)Total

$$acute = \frac{0.411}{1 + 10^{7.204 - pH}} + \frac{58.4}{1 + 10^{pH - 7.204}}$$

$$chronic (Apr1 - July31) = \left(\frac{0.0577}{1 + 10^{7.688 - pH}} + \frac{2.487}{1 + 10^{pH - 7.688}} \right) * MIN \left(2.85, 1.45 * 10^{0.028(25 - T)} \right)$$

$$chronic (Aug1 - Mar 31) = \left(\frac{0.0577}{1 + 10^{7.688 - pH}} + \frac{2.487}{1 + 10^{pH - 7.688}} \right) * 1.45 * 10^{0.028 * (25 - MAX(T, 7))}$$

NH₃ = old TVS

Warm Water Acute = 0.62/FT/FPH/2^(4 old) in mg/ (N)

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Big Thompson River Basin

4b. Mainstem of the Big Thompson from the Greeley-Loveland Canal diversion to County Road 11H.						
COSPBT04B	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture		DM	MWAT		acute chronic
Reviewable	Aq Life Warm 1	Temperature °C	WS-I	WS-I	Aluminum	--- ---
	Recreation E 5/1 - 10/15		acute	chronic	Arsenic	340 ---
	Recreation N 10/16 - 4/30	D.O. (mg/L)	---	5.0	Arsenic(T)	--- 0.02
	Water Supply	pH	6.5 - 9.0	---	Beryllium	--- ---
Qualifiers:		chlorophyll a (mg/m2)	---	---	Cadmium	TVS TVS
Other:		E. Coli (per 100 mL) 5/1 - 10/15	---	126	Cadmium(T)	5.0 ---
Temporary Modification(s):		E. Coli (per 100 mL) 10/16 - 4/30	---	630	Chromium III	--- TVS
Arsenic(chronic) = hybrid					Chromium III(T)	50 ---
Expiration Date of 12/31/2021					Chromium VI	TVS TVS
Selenium(chronic) = current condition					Copper	TVS TVS
Expiration Date of 12/31/2020					Iron	--- WS
					Iron(T)	--- 1000
					Lead	TVS TVS
					Lead(T)	50 ---
					Manganese	TVS TVS/WS
					Mercury	--- 0.01(t)
					Molybdenum(T)	--- 150
					Nickel	TVS TVS
					Nickel(T)	--- 100
					Selenium	TVS TVS
					Silver	TVS TVS
					Uranium	--- ---
					Zinc	TVS TVS

9. Mainstem of the Little Thompson River from the Culver Ditch diversion to the confluence with the Big Thompson River.						
COSPBT09	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture		DM	MWAT		acute chronic
Reviewable	Aq Life Warm 2	Temperature °C	WS-II	WS-II	Aluminum	--- ---
	Recreation E		acute	chronic	Arsenic	340 ---
	Water Supply	D.O. (mg/L)	---	5.0	Arsenic(T)	--- 0.02-10 ^A
Qualifiers:		pH	6.5 - 9.0	---	Beryllium	--- ---
Other:		chlorophyll a (mg/m2)	---	150*	Cadmium	TVS TVS
Temporary Modification(s):		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0 ---
Selenium(chronic) = 12.3					Chromium III	--- TVS
Expiration Date of 12/31/2020					Chromium III(T)	50 ---
*chlorophyll a (mg/m2)(chronic) = applies only above the facilities listed at 38.5(4).					Chromium VI	TVS TVS
*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).					Copper	TVS TVS
					Iron	--- WS
					Iron(T)	--- 1000
					Lead	TVS TVS
					Lead(T)	50 ---
					Manganese	TVS TVS/WS
					Mercury	--- 0.01(t)
					Molybdenum(T)	--- 150
					Nickel	TVS TVS
					Nickel(T)	--- 100
					Selenium	TVS TVS
					Silver	TVS TVS
					Uranium	--- ---
					Zinc	TVS TVS

All metals are dissolved unless otherwise noted.
T = total recoverable
t = total
tr = trout

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for details on TVS, TVS(tr), WS, temperature standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Cache La Poudre River Basin

11. Mainstem of the Cache La Poudre River from Shields Street in Ft. Collins to a point immediately above the confluence with Boxelder Creek.							
COSPCP11	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture		DM	MWAT		acute	chronic
Reviewable	Aq Life Warm 1 Recreation E	Temperature °C	WS-I	WS-I	Aluminum	---	---
Qualifiers:			acute	chronic	Arsenic	340	---
Other:		D.O. (mg/L)	---	5.0	Arsenic(T)	---	7.6
Temporary Modification(s): temperature(DM/MWAT) = current condition Expiration Date of 12/31/2020	12/1 - 2/29	pH	6.5 - 9.0	---	Beryllium	---	---
		chlorophyll a (mg/m2)	---	---	Cadmium	TVS	TVS
		E. Coli (per 100 mL)	---	126	Chromium III	TVS	TVS
		Inorganic (mg/L)			Chromium III(T)	---	100
			acute	chronic	Chromium VI	TVS	TVS
		Ammonia	TVS	TVS	Copper	TVS	TVS
		Boron	---	0.75	Iron(T)	---	1000
		Chloride	---	---	Lead	TVS	TVS
		Chlorine	0.019	0.011	Manganese	TVS	TVS
		Cyanide	0.005	---	Mercury	---	0.01(t)
		Nitrate	100	---	Molybdenum(T)	---	150
		Nitrite	---	2.7	Nickel	TVS	TVS
		Phosphorus	---	---	Selenium	TVS	TVS
		Sulfate	---	---	Silver	TVS	TVS
		Sulfide	---	0.002	Uranium	---	---
					Zinc	TVS	TVS
12. Mainstem of the Cache La Poudre River from a point immediately above the confluence with Boxelder Creek to the confluence with the South Platte River.							
COSPCP12	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture		DM	MWAT		acute	chronic
Reviewable	Aq Life Warm 1 Recreation E	Temperature °C	WS-I	WS-I	Aluminum	---	---
Qualifiers:			acute	chronic	Arsenic	340	---
Other:		D.O. (mg/L)	---	5.0	Arsenic(T)	---	7.6
Temporary Modification(s): temperature(DM/MWAT) = current condition Expiration Date of 12/31/2020		pH	6.5 - 9.0	---	Beryllium	---	---
		chlorophyll a (mg/m2)	---	---	Cadmium	TVS	TVS
		E. Coli (per 100 mL)	---	126	Chromium III	TVS	TVS
		Inorganic (mg/L)			Chromium III(T)	---	100
			acute	chronic	Chromium VI	TVS	TVS
		Ammonia	TVS	TVS	Copper	TVS	TVS
		Boron	---	0.75	Iron(T)	---	1000
		Chloride	---	---	Lead	TVS	TVS
		Chlorine	0.019	0.011	Manganese	TVS	TVS
		Cyanide	0.005	---	Mercury	---	0.01(t)
		Nitrate	100	---	Molybdenum(T)	---	150
		Nitrite	---	2.7	Nickel	TVS	TVS
		Phosphorus	---	---	Selenium	TVS	TVS
		Sulfate	---	---	Silver	TVS	TVS
		Sulfide	---	0.002	Uranium	---	---
					Zinc	TVS	TVS

All metals are dissolved unless otherwise noted.
 T = total recoverable
 t = total
 tr = trout

D.O. = dissolved oxygen
 DM = daily maximum
 MWAT = maximum weekly average temperature
 See 38.6 for details on TVS, TVS(tr), WS, temperature standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Cache La Poudre River Basin

13b. Mainstem of Boxelder Creek from its source to the confluence with the Cache La Poudre River.						
COSPCP13B	Classifications	Physical and Biological			Metals (ug/L)	
Designation		DM	MWAT		acute	chronic
Reviewable	Agriculture					
	Aq Life Warm 2					
	Recreation N 9/16 - 5/14					
	Recreation P 5/15 - 9/15					
Qualifiers:						
Other:						
Temporary Modification(s):						
Selenium(chronic) = current condition						
Expiration Date of 12/31/2020						
*chlorophyll a (mg/m2)(chronic) = applies only above the facilities listed at 38.5(4).						
*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).						
		Inorganic (mg/L)				
		acute	chronic			
Ammonia		TVS	TVS	Aluminum	---	---
Boron		---	0.75	Arsenic	340	---
Chloride		---	---	Arsenic(T)	---	100
Chlorine		0.019	0.011	Beryllium	---	---
Cyanide		0.005	---	Cadmium	TVS	TVS
Nitrate		100	---	Chromium III	TVS	TVS
Nitrite		---	0.5	Chromium III(T)	---	100
Phosphorus		---	0.17*	Chromium VI	TVS	TVS
Sulfate		---	---	Copper	TVS	TVS
Sulfide		---	0.002	Iron(T)	---	1000
				Lead	TVS	TVS
				Manganese	TVS	TVS
				Mercury	---	0.01(t)
				Molybdenum(T)	---	150
				Nickel	TVS	TVS
				Selenium	TVS	TVS
				Silver	TVS	TVS
				Uranium	---	---
				Zinc	TVS	TVS

All metals are dissolved unless otherwise noted.
T = total recoverable
t = total
tr = trout

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for details on TVS, TVS(tr), WS, temperature standards.

Table 2

SITE SPECIFIC RADIONUCLIDE STANDARDS*

(in Picocuries/Liter, except as noted)

The radionuclides listed below shall be maintained at the lowest practical level and in no case shall they be increased by any cause attributable to municipal, industrial, or agricultural practices to exceed the site specific numeric standards.

A. Ambient based site-specific standards:				
	Segment 2 Standley Lake	Segment 3 Great Western Reservoir	Segment 4a Segment 5 Woman Creek	Segment 4a Segment 4b Segment 5 Walnut Creek
Gross Alpha	6	5		
Gross Beta	9	12		
Plutonium	.03	.03	0.15** ***	0.15** ***
Americium	.03	.03	0.15** ***	0.15** ***
Tritium	500	500	500	500
Uranium	3	4	16.8 µg/l	16.8 µg/l
B. Other site-specific standard applicable to segments 2,3,4a, 4b, and 5.				
Curium	60	60	60	60
Neptunium	30	30	30	30

*Statewide standards also apply for radionuclides not listed above.

**0.15pCi/l Statewide Basic Standards.

***For plutonium and americium measurements in Segment 5 in Woman Creek and Segment 5 in Walnut Creek, attainment will be assessed based on the results of a 12-month flow-weighted rolling average concentration (computed monthly).

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS – FOOTNOTES

- (A) Whenever a range of standards is listed and referenced to this footnote, the first number in the range is a strictly health-based value, based on the Commission's established methodology for human health-based standards. The second number in the range is a maximum contaminant level, established under the federal Safe Drinking Water Act that has been determined to be an acceptable level of this chemical in public water supplies, taking treatability and laboratory detection limits into account. Control requirements, such as discharge permit effluent limitations, shall be established using the first number in the range as the ambient water quality target, provided that no effluent limitation shall require an "end-of-pipe" discharge level more restrictive than the second number in the range. Water bodies will be considered in attainment of this standard, and not included on the Section 303(d) List, so long as the existing ambient quality does not exceed the second number in the range.

- (B) Assessment of adequate refuge shall rely on the Cold Large Lake table value temperature criterion and applicable dissolved oxygen standard rather than the site-specific temperature standard.

EXHIBIT 8
PLUM CREEK WATER RECLAMATION AUTHORITY

DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Water Quality Control Commission

REGULATION NO. 38 - CLASSIFICATIONS AND NUMERIC STANDARDS FOR SOUTH PLATTE RIVER BASIN, LARAMIE RIVER BASIN, REPUBLICAN RIVER BASIN, SMOKY HILL RIVER BASIN

5 CCR 1002-38

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38.98 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; DECEMBER 10, 2018 RULEMAKING; FINAL ACTION JANUARY 14, 2019 EFFECTIVE DATE JUNE 30, 2019

The provisions of C.R.S. 25-8-202(1)(a), (b) and (2); 25-8-203; 25-8-204; and 25-8-402; provide the specific statutory authority for adoption of these regulatory amendments. The Commission also adopted in compliance with 24-4-103(4) C.R.S. the following statement of basis and purpose.

BASIS AND PURPOSE

Pursuant to the requirements in the Basic Standards (at 31.7(3)), the commission reviewed the status of temporary modifications scheduled to expire before December 31, 2020 to determine whether the temporary modification should be modified, eliminated, or extended.

No action: The Commission took no action of the temporary modifications on the following segments:

Upper South Platte Segment 10a: temporary modification of the copper standard (expires 12/31/2018; applies below the Plum Creek Water Reclamation Authority (PCWRA)) and temporary modification of the temperature standard (expires 12/31/2020). The Commission made no change to the expiration dates of these temporary modifications as the original time allotments were deemed adequate to resolve the uncertainty.

Extensions:

Upper South Platte Segment 10a: temporary modification of the manganese WS standard was extended to 12/31/2020. PCWRA presented evidence that additional time is needed to collect data to resolve uncertainty regarding the manganese WS standard. PCWRA presented evidence showing spatial and seasonal variability of natural manganese concentrations, that there is both in-stream non-attainment of the WS manganese standard as well as demonstrated non-compliance with the water quality based effluent limitation for manganese. The Commission reviewed the revised plan to resolve uncertainty submitted by PCWRA, and determined that additional time is required for data collection to resolve the variability and to examine groundwater quality and its influence on the manganese levels in Segment 10a. The Commission extended the current conditions temporary modification for manganese on Segment 10a with an expiration date of 12/31/2020. The Commission will review PCWRA's progress on this temporary modification at the 2020 Regulation 38 Basin Hearing.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Upper South Platte River Basin

10a. Mainstems of East Plum Creek, West Plum Creek, and Plum Creek from the boundary of National Forest lands to Chatfield Reservoir, mainstems of Stark Creek and Gove Creek from the boundary of National Forest lands to their confluence.							
COSPUS10A	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute	chronic		
Reviewable	Aq Life Warm 1	Temperature °C	WS-I	WS-I	Aluminum	---	---
	Recreation E		acute	chronic	Arsenic	340	---
	Water Supply	D.O. (mg/L)	---	5.0	Arsenic(T)	---	0.02
Qualifiers:		pH	6.5 - 9.0	---	Beryllium	---	---
Other:		chlorophyll a (mg/m2)	---	150*	Cadmium	TVS	TVS
Temporary Modification(s):		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0	---
Arsenic(chronic) = hybrid		Inorganic (mg/L)			Chromium III	---	TVS
Expiration Date of 12/31/2021			acute	chronic	Chromium III(T)	50	---
Copper(ac/ch) = current condition*		Ammonia	TVS	TVS	Chromium VI	TVS	TVS
Expiration Date of 12/31/2018		Boron	---	0.75	Copper	TVS	TVS
Manganese(chronic) = current condition*		Chloride	---	250	Iron	---	WS
Expiration Date of 6/30/2019 12/30/2020		Chlorine	0.019	0.011	Iron(T)	---	1000
temperature(DM/MWAT) = current condition* 12/1 - 2/29		Cyanide	0.005	---	Lead	TVS	TVS
Expiration Date of 12/31/2020		Nitrate	10	---	Lead(T)	50	---
*chlorophyll a (mg/m2)(chronic) = applies only above the facilities listed at 38.5(4).		Nitrite	---	0.5	Manganese	TVS	TVS/WS
Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).		Phosphorus	---	0.17	Mercury	---	0.01(t)
*TempMod: Copper = East Plum Creek and Plum Creek below the PCWRA discharge.		Sulfate	---	WS	Molybdenum(T)	---	150
*TempMod: Manganese = applies to the manganese WS standard.		Sulfide	---	0.002	Nickel	TVS	TVS
*TempMod: temperature(12/1 - 2/29) = East Plum Creek and Plum Creek below the PCWRA discharge.					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	---	---
					Zinc	TVS	TVS

EXHIBIT 9
CITY OF BLACK HAWK / BLACK HAWK – CENTRAL CITY SANITATION DISTRICT

DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Water Quality Control Commission

REGULATION NO. 38 - CLASSIFICATIONS AND NUMERIC STANDARDS FOR SOUTH PLATTE RIVER BASIN, LARAMIE RIVER BASIN, REPUBLICAN RIVER BASIN, SMOKY HILL RIVER BASIN

5 CCR 1002-38

....

38.98 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; DECEMBER 10, 2018 RULEMAKING; FINAL ACTION JANUARY 14, 2019 EFFECTIVE DATE JUNE 30, 2019

The provisions of C.R.S. 25-8-202(1)(a), (b) and (2); 25-8-203; 25-8-204; and 25-8-402; provide the specific statutory authority for adoption of these regulatory amendments. The Commission also adopted in compliance with 24-4-103(4) C.R.S. the following statement of basis and purpose.

BASIS AND PURPOSE

CLEAR CREEK SEGMENT 13B (NORTH FORK OF CLEAR CREEK):

The Commission considered the temporary modification for Clear Creek segment 13b. Black Hawk/Central City Sanitation District and the City of Black Hawk ("BH/CCSD") proposed extending the temporary modification for cadmium in Clear Creek Segment 13b. Evidence submitted by BH/CCSD shows that the metals concentrations in Clear Creek are the result of a combination of natural and human-induced conditions which are currently the focus of Superfund cleanup work. The Hazardous Materials and Waste Management Division and the U.S. Environmental Protection Agency completed substantial construction of the Mine Water Treatment Plant ("Mine WTP") on March 2, 2017. The official start date of the Mine WTP Long-Term Response Action was March 1, 2018, which was when the remedy was determined to be operational and functional. The Mine WTP is designed to treat water with high metals loads from three different sources: the National Tunnel, Gregory Incline, and contaminated groundwater from Gregory Gulch. As of August 2017, water from both the National Tunnel and Gregory Incline have been treated at the Mine WTP; however, treatment of the groundwater from Gregory Gulch is not anticipated to begin until later in 2018. The degree of improvement to the segment is still uncertain and will not be known until after the Mine Treatment Plant is fully operational and stream improvements have been quantified.

The BH/CCSD has a predicted water quality-based effluent limit compliance problem for cadmium. Therefore, the Commission extended the expiration date of the temporary modification for dissolved cadmium on Clear Creek Segment 13b to December 31, 2019, to allow additional time for the treatment measures to be implemented and the improvements to be quantified.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Clear Creek Basin

13b. Mainstem of North Clear Creek including all tributaries and wetlands from a point just below the confluence with Chase Gulch to the confluence with Clear Creek, except for the specific listings in Segment 13a.

COSPL13B	Classifications	Physical and Biological			Metals (ug/L)		
			DM	MWAT	acute	chronic	
UP	Agriculture						
	Aq Life Cold 2	Temperature °C	CS-I	CS-I	Aluminum	---	---
	Recreation E						
Qualifiers:		D.O. (mg/L)	---	6.0	Arsenic	340	---
Other:		D.O. (spawning)	---	7.0	Arsenic(T)	---	100
Temporary Modification(s):		pH	6.5 - 9.0	---	Beryllium	---	---
Cadmium(chronic) = 4.7		chlorophyll a	---	150*	Cadmium	TVS(tr)	TVS
Expiration Date of 12/31/2018 <u>12/31/2019</u>		E. Coli (per 100 ml)	---	126	Chromium III	TVS	TVS
temperature(DM/MWAT) = current condition					Chromium III(T)	---	100
Expiration Date of 12/31/2020					Chromium VI	TVS	TVS
		Inorganic (mg/L)			Copper	---	64
			acute	chronic	Iron(T)	---	5400
*chlorophyll a (mg/m2)(chronic) = applies only above the facilities listed at 38.5(4).		Ammonia	TVS	TVS	Lead	TVS	TVS
*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).		Boron	---	0.75	Manganese	TVS	TVS
		Chloride	---	---	Mercury	---	0.01(t)
		Chlorine	0.019	0.011	Molybdenum(T)	---	150
		Cyanide	0.005	---	Nickel	TVS	TVS
		Nitrate	100	---	Selenium	TVS	TVS
		Nitrite	---	0.05	Silver	TVS	TVS(tr)
		Phosphorus	---	0.11*	Uranium	---	---
		Sulfate	---	---	Zinc	---	740
		Sulfide	---	0.002			