



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 revised water quality classifications, standards and designations for multiple segments in the Classifications and Numeric Standards for:

- Upper Colorado River Basin and North Platte River, Regulation #33 (5 CCR 1002-33) and
- Lower Colorado River Basin, Regulation #37 (5 CCR 1002-37).

Proposed revisions and proposed statement of basis and purpose language have been submitted by the following:

- Exhibit 1 - Regulation #33, Water Quality Control Division (Division);
- Exhibit 2 - Regulation #37, Division;
- Exhibit 3 - Regulation #33, City of Steamboat Springs;
- Exhibit 4 - Regulation #37, Tri-State Generation and Transmission Association, Inc. and;
- Exhibit 5 - Regulation #33, Upper Blue Sanitation District.

In these attachments, proposed new language is shown with double-underlining and proposed deletions are shown with ~~strikeouts~~. Any alternative proposals related to the subject of this hearing will also be considered. The commission will also consider in the scope of this hearing any updates regarding progress related to temporary modifications and the associated plans to resolve uncertainty, and may consider modifications to or deletion of the temporary modifications on these segments depending on the information provided. These updates will include, but are not limited to, information from Peabody Sage Creek Mining Company, Twentymile Coal, LLC, and Seneca Coal Company, regarding iron temporary modifications on Yampa River segments 13d and 13i, and selenium temporary modifications on Yampa River segments 13b, 13d, 13e, 13g, 13h, 13i, and 13j.

SCHEDULE OF IMPORTANT DATES

Proponent's prehearing statement due	03/13/2019 5 pm	Additional information below.
Party status requests due	03/27/2019 5 pm	Additional information below.
Responsive prehearing statements due	04/17/2019 5 pm	Additional information below.



Rebuttal statements due	5/15/2019 5 pm	Additional information below.
Last date for submittal of motions	5/20/2019 by noon	Additional information below.
Notify commission office if participating in prehearing conference by phone or email	5/20/2019 by noon	Send email to cdphe.wqcc@state.co.us with participant(s) name(s)
Prehearing Conference (mandatory for parties)	5/21/2019 9:30 am	Building C, 1 st floor, Room C1D Department of Public Health and Environment 4300 Cherry Creek Drive South Denver, CO 80246 +1 650-466-0971 PIN: 433 019#
Cutoff of negotiations	5/31/2019	NA
Division's consolidated proposals	6/5/2019	NA
Rulemaking Hearing	6/10/2019 10:00 am	Grand Junction City Hall Auditorium 250 North 5 th Street Grand Junction, CO 81501

TRIENNIAL REVIEW PROCESS OVERVIEW

This Rulemaking Hearing is the third and final step in a three-step process utilized in Colorado for triennial review of water quality classifications and standards. The first step is the Issues Scoping Hearing (ISH), which provides an opportunity for early identification of potential issues that may need to be addressed in the next major rulemaking. The ISH for these regulations were held in October 2017. The second step in the triennial review process is the Issues Formulation Hearing (IFH), which results in the identification of specific issues to be addressed in the next major rulemaking. The IFH for these regulations were held in November 2018. The third step is the rulemaking hearing where any revisions to the water quality classifications and standards are formally adopted by the WQCC. Information regarding triennial reviews of water quality classifications and standards in Colorado is provided on the WQCC [website](#).

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.wqcc@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.

The commission encourages informal discussions among the parties, the Division, and other interested persons prior to the hearing in an effort to reach consensus or to develop proposed resolutions of issues and/or narrow the issues potentially in dispute. The commission strongly encourages that any multi-party/division proposals for the resolution of issues (including proposed statement of basis and purpose language whenever feasible) be submitted as part of the administrative record as early as possible, but at least by the prehearing conference.

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 1 650-466-0971 and enter the conference code 433019#. Failure to attend the prehearing conference in person or by telephone shall be cause to deny party status or deny opportunity for oral comments.

CUTOFF DATE FOR MOTIONS:

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 May 29, 2019.

SPECIFIC STATUTORY AUTHORITY:

The provisions of sections 25-8-202(1)(a) and (b); 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 11th day of February, 2019 at Denver, Colorado.

WATER QUALITY CONTROL COMMISSION



Trisha Oeth, Administrator



Exhibit 1

Water Quality Control Division

Draft Proposed

Regulation #33

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

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

33.1 AUTHORITY

These regulations are promulgated pursuant to section 25-8-101 et seq. C.R.S., as amended, and in particular, 25-8-203 and 25-8-204.

33.2 PURPOSE

These regulations establish classifications and numeric standards for the Colorado River, the Yampa River, and the North Platte River, including all tributaries and standing bodies of water as indicated in section 33.6. The classifications identify the actual beneficial uses of the water. The numeric standards are assigned to determine the allowable concentrations of various parameters. Discharge permits will be issued by the Water Quality Control Division to comply with basic, narrative, and numeric standards and control regulations so that all discharges to waters of the state protect the classified uses. ~~(See section 31.14).~~ It is intended that these and all other stream classifications and numeric standards be used in conjunction with and be an integral part of Regulation No. 31 Basic Standards and Methodologies for Surface Water.

33.3 INTRODUCTION

These regulations and tables present the classifications and numeric standards assigned to stream segments listed in the attached tables (See ~~section 33.6~~Appendix 33-1). As additional stream segments are classified and numeric standards for designated parameters are assigned for this drainage system, they will be added to or replace the numeric standards in the tables in ~~section 33.6~~Appendix 33-1. Any additions or revisions of classifications or numeric standards can be accomplished only after public hearing by the Commission and proper consideration of evidence and testimony as specified by the statute and the Basic Standards and Methodologies for Surface Water.

33.4 DEFINITIONS

See the Colorado Water Quality Control Act and the codified water quality regulations for definitions.

33.5 BASIC STANDARDS

(1) ~~TEMPERATURE~~Temperature

All waters of Region 12 are subject to the following standard for temperature. (Discharges regulated by permits, which are within the permit limitations, shall not be subject to enforcement proceedings under this standard). Temperature shall maintain a normal pattern of diurnal and seasonal fluctuations with no abrupt changes and shall have no increase in temperature of a magnitude, rate, and duration deemed deleterious to the resident aquatic life. This standard shall not be interpreted or applied in a manner inconsistent with section 25-8-104, C.R.S.

(2) QUALIFIERSQualifiers

See Basic Standards and Methodologies for Surface Water for a listing of organic standards at 31.11 and metal standards found at 31.16 Table III. The column in the tables headed "Water Fish" are presumptively applied to all Aquatic Life class 1 streams and are applied to Aquatic Life class 2 streams on a case-by-case basis as shown in the tables in 33.6Appendix 33-1. The column in the tables at 31.11 headed "Fish Ingestion" is presumptively applied to all Aquatic Life class 1 streams which do not have a water supply classification, and are applied to Aquatic Life class 2 streams which do not have a water supply classification, on a case-by-case basis as shown in Tables 33.6Appendix 33-1.

(3) URANIUMUranium

- (a) All waters of the Upper Colorado River Basin, are subject to the following basic standard for uranium, unless otherwise specified by a water quality standard applicable to a particular segment. However, discharges of uranium regulated by permits which are within these permit limitations shall not be a basis for enforcement proceedings under this basic standard.
- (b) Uranium level in surface waters shall be maintained at the lowest practicable level.
- (c) In no case shall uranium levels in waters assigned a water supply classification be increased by any cause attributable to municipal, industrial, or agricultural discharges so as to exceed 16.8-30 $\mu\text{g/l}$ or naturally-occurring concentrations (as determined by the State of Colorado), whichever is greater.
 - (i) The first number in the 16.8-30 $\mu\text{g/l}$ 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.

(4) NUTRIENTSNutrients

Prior to May-December 31, 2022 for chlorophyll a and prior to December 31, 2027 for total phosphorus, interim nutrient values will be considered for adoption only in the limited circumstances defined at 31.17(e) and (f). These circumstances include headwaters, Direct Use Water Supply (DUWS) Lakes and Reservoirs, and other special circumstances determined by the Commission. Additionally, prior to May-December 31, 2017-2027, only total phosphorus and chlorophyll a will be considered for adoption. After May-December 31, 2017-2027, total nitrogen will be considered for adoption per the circumstances outlined in 31.17(e)g).

Prior to May-December 31, 20227, nutrient criteria will be adopted for headwaters on a segment by segment basis for the Upper Colorado and North Platte River Basins. Moreover, pursuant to 31.17(e) nutrient standards will only be adopted for waters upstream of all permitted domestic wastewater treatment facilities discharging prior to May 31, 2012 or with preliminary effluent limits requested prior to May 31, 2012, and any non-domestic facilities subject to Regulation 85 effluent limits and discharging prior to May 31, 2012. The following is a list of all permitted domestic wastewater treatment facilities discharging prior to May 31, 2012 or with preliminary effluent limits requested prior to May 31, 2012, and any non-domestic facilities subject to Regulation 85 effluent limits and discharging prior to May 31, 2012 in the Upper Colorado and North Platte River Basins:

Segment	Permittee	Facility name	Permit No.
COUCUC03	Colorado Dept of Transportation	Grizzly Creek Res Area WWTF	COG588067
COUCUC03	Rock Gardens MHP	Rock Gardens MHP & Campground	COG588083
COUCUC03	Colorado Dept of Transportation	Hanging Lake Res Area WWTF	COG588076
COUCUC03	Colorado Dept of Transportation	Bair Ranch Rest Area	COG588075
COUCUC03	Hermes Group	Two Rivers Village Metro Dist WWTF	COG588070
COUCUC03	Roundup River Ranch	Roundup River Ranch WWTF	COG588116
COUCUC03	Hot Sulphur Springs Town of	Hot Sulphur Springs WWTF	COG588084
COUCUC03	Allegient Management	Ouray Ranch Homeowners Assn WWTF	COG588041
COUCUC06a	C Lazy U Ranch Holdings LLC % Triton Investment Co	C Lazy U Ranch, INC.	COG588072
COUCUC06b	Three Lakes Water and Sanitation District	Willow Creek Lagoons	CO0037681
COUCUC07 b d	Kremmling Sanitation District	Kremmling Sanitation Dist WWTF	CO0048437
COUCUC10a	Winter Park Water and Sanitation District	Winter Park WSD WWTF	CO0026051
COUCUC10a	Young Life Campaign Inc	Crooked Creek Ranch	CO0045411
COUCUC10a	Colorado Mountain Resort Investors LLC	Devil's Thumb Ranch	CO0046566
COUCUC10a	Tabernash Meadows WSD	Tabernash Meadows WSD WWTF	CO0045501
COUCUC10c	Fraser Town of	Upper Fraser Valley TP	CO0040142
COUCUC10c	Granby Sanitation District	Granby Sanitation District	CO0020699
COUCBL02a	Upper Blue Sanitation Dist	Iowa Hill Water Reclamation	CO0045420
COUCBL08	Dundee Realty USA LLC	Arapahoe Basin Ski Area	CO0023876
COUCBL13	Copper Mountain Consolidated Metro Dist	Copper Mtn Cons Metro District	CO0021598
COUCBL17	Silverthorne/Dillon Joint Sewer Authority	Blue River WWTF	CO0020826
COUCBL22	Frisco Sanitation District	Frisco Sanitation District WWTF	CO0020451
COUCBL22	Snake River WWTF	Summit County Snake River WWTP	CO0029955
COUCBL22	Upper Blue Sanitation District	Farmers Korner WWTF	CO0021539
COUCEA02	Red Cliff Town of	Red Cliff Town of WWTP	CO0021385
COUCEA08	Eagle River WSD	Vail WWTF	CO0021369
COUCEA09a	Eagle River Water & Sanitation Dist	Avon WWTP	CO0024431
COUCEA09a	Eagle River Water & San Dist	Edwards WWTF	CO0037311
COUCEA09b	Eagle Town of	Eagle Town of WWTP	CO0048241
COUCEA09b	Gypsum Town of	Gypsum Town of WWTF	CO0048830
COUCRF03a	Aspen Consolidated Sanitation District	Aspen Consolidated San District	CO0026387
COUCRF03a	Woody Creek Mobile HOA	Woody Creek Mobile Home Park	COG588103
COUCRF03a	Aspen Village Inc c/o Independence Environmental Services	Aspen Village, INC.	COG588085
COUCRF03a	Riversbend HOA	Riverbend Apartments	COG588066
COUCRF03a	Independence Environmental Services	Lazy Glen Homeowners Assoc.	COG588049

Segment	Permittee	Facility name	Permit No.
COUCRF03a	Basalt SD	Basalt Sanitation District	COG588063
COUCRF03a	Ranch at Roaring Fork c/o Independence Environmental Services	Ranch at Roaring Fork HOA	COG588051
COUCRF03a	Carbondale Town of	Carbondale Town of	COG588050
COUCRF03a	Roaring Fork Water and San District	Roaring Fork WSD WWTF	CO0044750
COUCRF03a	Spring Valley SD	Spring Valley SD WWTF	CO0046124
COUCRF03a	Oak Meadows Service Company	Oak Meadows WWTF	CO0045802
COUCRF03c	Sunlight Inc	Sunlight, INC.	CO0038598
COUCRF03c	Mid Valley Metro District	Mid Valley Metro Dist WWTF	COG588105
COUCRF03c	Blue Creek Ranch LLC	Blue Creek Ranch	COG588074
COUCRF03c	H Lazy F LLC	H Lazy F MHP WWTF	COG588035
COUCRF03c	El Rocko Mobile Home Park	El Rocko MHP	COG588029
COUCRF04	Snowmass WSD	Snowmass WSD	CO0023086
COUCRF08	Sopris Engineering LLC	Redstone Castle WWTF	COG588115
COUCRF08	Redstone WSD	Redstone WSD WWTF	CO0046370
COUCNP05b	Walden Town of	Walden Town of WWTF	CO0020788
COUCYA02a	Yampa Town of	Yampa WWTF	CO0030635
COUCYA02a	Routt County	Milner Community WWTF	CO0047449
COUCYA02c	Hayden Town of	Hayden Town WWTF	CO0040959
COUCYA02c	Steamboat Springs City of	Steamboat Springs, City of	CO0020834
COUCYA03	Whiteman School	Whiteman School	CO0031062
COUCYA04	Routt County Phippsburg/Dept of Envir Hlth	Routt CO for Phippsburg Comm WWTF	COG589026
COUCYA07a	Oak Creek Town of	Oak Creek, Town of	CO0041106
COUCYA08	Steamboat Lake Water and Sanitation Dist	Steamboat Lake Water & Sanitation Dist WWTF	CO0035556
COUCYA022	Morrison Creek Metropolitan Water and Sanitation District	Morrison Creek Metro WWTF	CO0022969
COUCYA022	Steamboat Lake Water and Sanitation Dist	Steamboat Lake Water & Sanitation Dist WWTF	CO0035556

Prior to ~~May-December~~ 31, 2027:

- For segments located entirely above these facilities, nutrient standards apply to the entire segment.
- For segments with portions downstream of these facilities, *nutrient standards only apply above these facilities*. A ~~foot~~note was added to the total phosphorus and chlorophyll a standards in these segments. The ~~foot~~note references the table of qualified facilities at 33.5(4).
- For segments located entirely below these facilities, nutrient standards do not apply.

A ~~foot~~note was added to the total phosphorus and chlorophyll a standards in lakes segments as nutrients standards apply only to lakes and reservoirs larger than 25 acres surface area.

33.6 TABLES

(1) Introduction

The numeric standards for various parameters in this regulation and in the tables in Appendix 33-1 were assigned by the Commission after a careful analysis of the data presented on actual stream conditions and on actual and potential water uses.

Numeric standards are not assigned for all parameters listed in the tables attached to 31.16. If additional numeric standards are found to be needed during future periodic reviews, they can be assigned by following the proper hearing procedures.

(2) Abbreviations:

(a) The following abbreviations are used in this regulation and in the tables in Appendix 33-1:

<u>ac</u>	=	<u>acute (1-day)</u>
°C	=	degrees celsius
<u>ch</u>	=	<u>chronic (30-day)</u>
CL	=	cold lake temperature tier
CLL	=	cold large lake temperature tier
CS-I	=	cold stream temperature tier one
CS-II	=	cold stream temperature tier two
DM	=	daily maximum <u>temperature</u>
DUWS	=	direct use water supply
D.O.	=	dissolved oxygen
<u>E. coli</u>	=	<u>Escherichia coli</u>
mg/l	=	milligrams per liter
MWAT	=	maximum weekly average temperature
OW	=	outstanding waters
sc	=	sculpin
sp	=	spawning
SSE	=	site-specific equation
T	=	total recoverable
t	=	total
tr	=	trout
TVS	=	table value standard
<u>µg/l</u>	=	micrograms per liter
UP	=	use-protected
<u>WAT</u>	=	<u>weekly average temperature</u>
WL	=	warm lake temperature tier
WS	=	water supply
WS-I	=	warm stream temperature tier one
WS-II	=	warm stream temperature tier two
WS-III	=	warm stream temperature tier three
<u>WS-IV</u>	=	<u>warm stream temperature tier four</u>

(b) In addition, the following abbreviations were used:

<u>Fe(ch)Iron</u>	=	WS
<u>Mn(ch)</u>	=	WS
<u>Manganese</u>	=	WS
<u>SO₄Sulfate</u>	=	WS

These abbreviations mean: For all surface waters with an actual Water Supply use, the less restrictive of the following two options shall apply as numerical chronic standards, as specified in the Basic Standards and Methodologies at 31.16 Table II and III:

- (i) existing quality as of January 1, 2000; or
- (ii) Iron = 300 µg/l (dissolved)
Manganese = 50 µg/l (dissolved)
SO₄Sulfate = 250 mg/l

For all surface waters with a “water supply” classification that are not in actual use as a water supply, no water supply standards are applied for iron, manganese or sulfate, unless the Commission determines as the result of a site-specific rulemaking hearing that such standards are appropriate.

(c) Temporary Modification for Water + Fish Chronic Arsenic Standard

- (i) The temporary modification for chronic arsenic standards applied to segments with an arsenic standard of 0.02 $\mu\text{g/l}$ that has been set to protect the Water + Fish qualifier is listed in the temporary modification and qualifiers column as As(ch)=hybrid.
- (ii) For discharges existing on or before 6/1/2013, the temporary modification is: As(ch)=current condition, expiring on 12/31/2021.
- (iii) For new or increased discharges commencing on or after 6/1/2013, the temporary modification is: As(ch)=0.02-3.0 $\mu\text{g/l}$ (Trec), expiring on 12/31/2021.
 - (a) The first number in the range is the health-based water quality standard previously adopted by the Commission for the segment.
 - (b) The second number in the range is a technology based value established by the Commission for the purpose of this temporary modification.
 - (c) 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.

(3) Table Value Standards

In certain instances in the tables in Appendix 33-1, the designation “TVS” is used to indicate that for a particular parameter a “table value standard” has been adopted. This designation refers to numerical criteria set forth in the Basic Standards and Methodologies for Surface Water. The criteria for which the TVS are applicable are on the following table.

**TABLE VALUE STANDARDS
(Concentrations in $\mu\text{g/l}$ unless noted)**

PARAMETER ⁽¹⁾	TABLE VALUE STANDARDS ⁽²⁾⁽³⁾
Aluminum (Trec)	Acute = $e^{(1.3695[\ln(\text{hardness})]+1.8308)}$ pH equal to or greater than 7.0 Chronic = $e^{(1.3695[\ln(\text{hardness})]-0.1158)}$ pH less than 7.0 Chronic = $e^{(1.3695[\ln(\text{hardness})]-0.1158)}$ or 87, whichever is more stringent
Ammonia ⁽⁴⁾	Cold Water = (mg/l as N) Total $acute = \frac{0.275}{1 + 10^{7.204 - pH}} + \frac{39.0}{1 + 10^{pH - 7.204}}$ $chronic = \left(\frac{0.0577}{1 + 10^{7.688 - pH}} + \frac{2.487}{1 + 10^{pH - 7.688}} \right) * MIN \left(2.85, 1.45 * 10^{0.028(25 - T)} \right)$

	<p>Warm Water = (mg/l as N)Total</p> $acute = \frac{0.411}{1 + 10^{7.204 - pH}} + \frac{58.4}{1 + 10^{pH - 7.204}}$ $chronic (Apr1 - Aug31) = \left(\frac{0.0577}{1 + 10^{7.688 - pH}} + \frac{2.487}{1 + 10^{pH - 7.688}} \right) * MIN \left(2.85, 1.45 * 10^{0.028(25 - T)} \right)$ $chronic (Sep1 - Mar31) = \left(\frac{0.0577}{1 + 10^{7.688 - pH}} + \frac{2.487}{1 + 10^{pH - 7.688}} \right) * 1.45 * 10^{0.028(25 - MAX(T, 7))}$
Cadmium	<p>Acute = $(1.136672 - [\ln(\text{hardness}) \times (0.041838)]) \times e^{0.9151[\ln(\text{hardness})] - 3.1485}$</p> <p>Acute(Trout) = $(1.136672 - [\ln(\text{hardness}) \times (0.041838)]) \times e^{0.9151[\ln(\text{hardness})] - 3.6236}$</p> <p>Chronic = $(1.101672 - [\ln(\text{hardness}) \times (0.041838)]) \times e^{0.7998[\ln(\text{hardness})] - 4.4451}$</p>
Chromium III ⁽⁵⁾	<p>Acute = $e^{(0.819[\ln(\text{hardness})] + 2.5736)}$</p> <p>Chronic = $e^{(0.819[\ln(\text{hardness})] + 0.5340)}$</p>
Chromium VI ⁽⁵⁾	<p>Acute = 16</p> <p>Chronic = 11</p>
Copper	<p>Acute = $e^{(0.9422[\ln(\text{hardness})] - 1.7408)}$</p> <p>Chronic = $e^{(0.8545[\ln(\text{hardness})] - 1.7428)}$</p>
Lead	<p>Acute = $(1.46203 - [(\ln \text{hardness}) * (0.145712)]) * e^{(1.273[\ln(\text{hardness})] - 1.46)}$</p> <p>Chronic = $(1.46203 - [(\ln \text{hardness}) * (0.145712)]) * e^{(1.273[\ln(\text{hardness})] - 4.705)}$</p>
Manganese	<p>Acute = $e^{(0.3331[\ln(\text{hardness})] + 6.4676)}$</p> <p>Chronic = $e^{(0.3331[\ln(\text{hardness})] + 5.8743)}$</p>
Nickel	<p>Acute = $e^{(0.846[\ln(\text{hardness})] + 2.253)}$</p> <p>Chronic = $e^{(0.846[\ln(\text{hardness})] + 0.0554)}$</p>
Selenium ⁽⁶⁾	<p>Acute = 18.4</p> <p>Chronic = 4.6</p>
Silver	<p>Acute = $1/2 e^{(1.72[\ln(\text{hardness})] - 6.52)}$</p> <p>Chronic = $e^{(1.72[\ln(\text{hardness})] - 9.06)}$</p> <p>Chronic(Trout) = $e^{(1.72[\ln(\text{hardness})] - 10.51)}$</p>

Temperature	TEMPERATURE TIER	TIER CODE	SPECIES EXPECTED TO BE PRESENT	APPLICABLE MONTHS	TEMPERATURE STANDARD (°C)	
					(MWAT)	(DM)
Temperature	Cold Stream Tier I ⁽⁷⁾	CS-I	brook trout, cutthroat trout	June – Sept.	17.0	21.7
				Oct. – May	9.0	13.0
	Cold Stream Tier II ⁽⁷⁾	CS-II	all other cold-water species	April – Oct.	18.3	23.9 24.3
				Nov. – March	9.0	13.0
	Cold Lake ⁽⁸⁾	CL	brook trout, brown trout, cutthroat trout, lake trout, rainbow trout, Arctic grayling, sockeye salmon	April – Dec.	17.0	21.2
				Jan. – March	9.0	13.0
	Cold Large Lake (>100 acres surface area) ⁽⁸⁾	CLL	brown trout, lake trout, rainbow trout	April – Dec.	18.3	23.8 24.2
				Jan. – March	9.0	13.0
	Warm Stream Tier I	WS-I	common shiner, Johnny darter, orangethroat darter, stonecat	March – Nov.	24.2	29.0
				Dec. – Feb.	12.1	14.5 24.6
	Warm Stream Tier II	WS-II	brook stickleback, central stoneroller, creek chub, longnose dace, Northern redbelly dace, finescale dace, razorback sucker, white sucker, mountain sucker	March – Nov.	27.5	28.6
				Dec. – Feb.	13.8	14.3 25.2
	Warm Stream Tier III	WS-III	all other warm-water species	March – Nov.	28.7	31.8
Dec. – Feb.				14.3	15.9 24.9	
Warm Lakes	WL	yellow perch, walleye, pumpkinseed, smallmouth bass, striped bass, white bass, largemouth bass, bluegill, spottail shiner, stonecat , Northern pike, tiger muskellunge, black crappie, common carp, gizzard shad, sauger, white crappie, wiper-	April – Dec.	26.32	29.53	
			Jan. – March	13.21	14.8 24.1	
Uranium	Acute= $e^{(1.1021[\ln(\text{hardness})]+2.7088)}$ Chronic= $e^{(1.1021[\ln(\text{hardness})]+2.2382)}$					
Zinc	Acute = $0.978 * e^{(0.9094[\ln(\text{hardness})]+0.9095)}$ Chronic = $0.986 * e^{(0.9094[\ln(\text{hardness})]+0.6235)}$ if hardness less than 102 mg/l CaCO ₃ Chronic (sculpin) = $e^{(2.140[\ln(\text{hardness})]-5.084)}$					

TABLE VALUE STANDARDS - FOOTNOTES

- (1) Metals are stated as dissolved unless otherwise specified.
- (2) Hardness values to be used in equations are in mg/l as calcium carbonate and shall be no greater than 400 mg/L, except for aluminum for which hardness shall be no greater than 220 mg/L. The hardness values used in calculating the appropriate metal standard should be based on the lower 95 percent confidence limit of the mean hardness value at the periodic low flow criteria as determined from a regression analysis of site-specific

data. Where insufficient site-specific data exists to define the mean hardness value at the periodic low flow criteria, representative regional data shall be used to perform the regression analysis. Where a regression analysis is not appropriate, a site-specific method should be used. In calculating a hardness value, regression analyses should not be extrapolated past the point that data exist.

- (3) Both acute and chronic numbers adopted as stream standards are levels not to be exceeded more than once every three years on the average.
- (4) For acute conditions the default assumption is that salmonids could be present in cold water segments and should be protected, and that salmonids do not need to be protected in warm water segments. For chronic conditions, the default assumptions are that early life stages could be present all year in cold water segments and should be protected. In warm water segments the default assumption is that early life stages are present and should be protected only from April 1 through August 31. These assumptions can be modified by the Commission on a site-specific basis where appropriate evidence is submitted.
- (5) Unless the stability of the chromium valence state in receiving waters can be clearly demonstrated, the standard for chromium should be in terms of chromium VI. In no case can the sum of the instream levels of Hexavalent and Trivalent Chromium exceed the water supply standard of 50 $\mu\text{g/l}$ total chromium in those waters classified for domestic water use.
- (6) Selenium is a bioaccumulative metal and subject to a range of toxicity values depending upon numerous site-specific variables.
- ~~(7) Mountain whitefish-based summer temperature criteria [16.9 (ch), 21.2 (ac)] apply when and where spawning and sensitive early life stages of this species are known to occur.~~
- ~~(8) Lake trout-based summer temperature criteria [16.6 (ch), 22.4 (ac)] apply where appropriate and necessary to protect lake trout from thermal impacts.~~
- ~~(7) E.coli criteria and resulting standards for individual water segments, are established as indicators of the potential presence of pathogenic organisms. Standards for E. coli are expressed as a two-month geometric mean. Site-specific or seasonal standards are also two-month geometric means unless otherwise specified.~~
- ~~(8) All phosphorus standards are based upon the concentration of total phosphorus.~~
- ~~(9) The pH standards of 6.5 (or 5.0) and 9.0 are an instantaneous minimum and maximum, respectively to be applied as effluent limits. In determining instream attainment of water quality standards for pH, appropriate averaging periods may be applied, provided that beneficial uses will be fully protected.~~

(4) Site-Specific Standards, Assessment Locations, and Assessment Criteria

~~The following criteria shall be used when assessing whether a specified waterbody is in attainment of the specified standard.~~

- (a) Yampa River Segment 13b: Iron Standards and Assessment Locations ~~for Iron~~
Iron Standards:

Middle Creek:

March-June, Iron(chronic)=2090(T), median of all data

July-February, Iron(chronic)=1000(T)

Foidel Creek: Iron(chronic)=1000(T), median of all data

Iron Assessment Locations:

Middle Creek Site G-MC-2/Site 29: located at 40°23'48.3"N, 106°58'47.0"W.

Foidel Creek Site 14: located at 40°33'48.6"N, 107°08'63.5"W.

Foidel Creek Site 8: located at 40°21'55.7"N, W107°02'43.6"W.

Foidel Creek Site 900: located at 40°23'24.7"N, 106°59'40.9"W.

(b) Yampa River Segment 13d: Iron Standards and Assessment Locations ~~for Iron~~

Iron Standards:

March-April, Iron(chronic) = 3040(T), snowmelt season median values

May-February, Iron(chronic) = 1110(T), no-snowmelt season median values

Iron Assessment Locations:

Seneca II-W Stream Site 7 on Hubberson Gulch (WSH7): located in the middle reaches of Hubberson Gulch

Seneca II-W Flume Site 1 on Hubberson Gulch (WSHF1): located on Hubberson Gulch just upstream of its confluence with Dry Creek

Seneca II-W Stream Site 5 on Dry Creek (WSD5): located in the middle reaches of Dry Creek

(c) Yampa River Segment 13e: Iron Standards and Assessment Locations ~~for Iron~~

Iron Standards:

Upper Sage Creek: Iron(chronic)=1250(T), median of all data

Lower Sage Creek: Iron(chronic)=1000(T), median of all data

Break between Upper and Lower Sage Creek is the west border of Section 18, T5N, R87W.

Iron Assessment Locations:

Yoast Stream Site 2 on Sage Creek (YSS2): located upstream of the west border of Section 18, T5N, R87W

Seneca II-W Stream Site 3 on Sage Creek (WSSF3): located downstream of the west border of Section 18, T5N, R87W

(d) Upper Colorado Segment 12: Temperature Standards

All locations DM and MWAT = CL,CLL from 1/31 – 3/31

Grand Lake DM = 22.4 and MWAT = 16.6 from 4/1 – 12/31

Lake Granby DM = 22.4 and MWAT = 19.6 from 4/1– 12/31

Shadow Mountain Reservoir DM = CLL and MWAT = 19.3 from 4/1 – 12/31

All other locations DM and MWAT = CL,CLL from 4/1 – 12/31

(e) Upper Colorado Segment 13: Temperature Standards

All locations DM and MWAT = CL,CLL from 1/31 – 3/31

Wolford Mountain Reservoir DM = CLL and MWAT = 21.3 from 4/1 – 12/31

Williams Fork Reservoir DM = 22.4 and MWAT = 21.6 from 4/1-12/31

Deep Lake DM = CL and MWAT = 16.6 from 4/1 – 12/31

All other locations DM and MWAT = CL/CLL from 4/1 – 12/31

(f) North Platte River Segment 9: Temperature Standards

All locations DM and MWAT = CL, CLL from 1/1 – 1/31

Lower Big Creek Lake and Upper Big Creek Lake DM = 22.4 and MWAT = 16.6 from 4/1 -12/31

Agua Fria Lake DM = CL and MWAT = 16.6 from 4/1 – 12/31

South Delaney Lake DM = CLL and MWAT = 18.8 from 4/1 – 12/31

North Delaney Lake DM = CLL and MWAT = 20.1 from 4/1 – 12/31

Lake John DM = CLL and MWAT = 21.2 from 4/1 – 12/31

All other locations DM and MWAT= CL,CLL from 4/1-12/31

(g) Yampa River Segment 22: Temperature Standards

All locations DM and MWAT = CL, CLL from 1/1 – 3/31

Pearl Lake DM = CLL and MWAT = 19.6 from 4/1 – 12/31

Steamboat Reservoir DM = CLL and MWAT = 21.6 from 4/1 – 12/31

Stagecoach Reservoir DM = CLL and MWAT = 21.7 from 4/1 – 12/31

All other locations DM and MWAT = CL,CLL from 4/1-12/31

(h) Upper Colorado River Segment 3: Temperature Standards

Upper Colorado from below the confluence with the Blue River to below the confluence with the Roaring Fork River.

DM = 21.2 and MWAT = 16.9 from 4/1 – 5/31

DM and MWAT = CS-II from 6/1 – 9/30

DM = 21.2 and MWAT = 16.9 from 10/1 – 10/31

DM and MWAT = CS-II from 11/1 – 3/31

All other locations DM and MWAT = CS-II

(i) Upper Colorado River Segment 7a: Temperature Standards

Canyon Creek

DM = 21.2 and MWAT = 16.9 from 4/1 – 5/31

DM and MWAT = CS-II from 6/1 – 9/30

DM = 21.2 and MWAT = 16.9 from 10/1 – 10/31

DM and MWAT = CS-II from 11/1 – 3/31

All other locations DM and MWAT = CS-II

(j) Roaring Fork River Segment 3c: Temperature Standards

DM = 21.2 and MWAT = 16.9 from 4/1 – 5/31

DM and MWAT = CS-II from 6/1 – 9/30

DM = 21.2 and MWAT = 16.9 from 10/1 – 10/31

DM and MWAT = CS-II from 11/1 – 3/31

(k) Yampa River Segment 2b: Standards for Temperature

Yampa River from above the confluence with Oak Creek to below the confluence with Dry Creek.

DM = 21.2 and MWAT = 16.9 from 4/1 – 5/31

DM and MWAT = CS-II from 6/1 – 9/30

DM = 21.2 and MWAT = 16.9 from 10/1 – 10/31

DM and MWAT = CS-II from 11/1 – 3/31

Yampa River below confluence with Dry Creek DM and MWAT = CS-II

(l) Yampa River Segment 13b: Standards for Temperature

Fish Creek

DM = 21.2 and MWAT = 16.9 from 4/1 – 5/31

DM and MWAT = WS-II from 6/1 – 9/30

DM = 21.2 and MWAT = 16.9 from 10/1 – 10/31

DM and MWAT = WS-II from 11/1 – 3/31

All other locations DM and MWAT = WS-II

(m). Yampa River Segment 13f: Standards for Temperature

DM = 21.2 and MWAT = 16.9 from 4/1 – 5/31

DM and MWAT = CS-II from 6/1 – 9/30

DM = 21.2 and MWAT = 16.9 from 10/1 – 10/31

DM and MWAT = CS-II from 11/1 – 3/31

(5) Stream Classifications and Water Quality Standards Tables

The stream classifications and water quality standards tables in Appendix 33-1 are incorporated herein by reference.

The following is information regarding duration and measured form of standards in Appendix 33-1:

- (a) *E. coli* criteria and resulting standards for individual water segments, are established as indicators of the potential presence of pathogenic organisms. Standards for *E. coli* are expressed as a two-month geometric mean. Site-specific or seasonal standards are also two-month geometric means unless otherwise specified.
- (b) All phosphorus standards are based upon the concentration of total phosphorus.
- (c) The pH standards of 6.5 (or 5.0) and 9.0 are an instantaneous minimum and maximum, respectively to be applied as effluent limits. In determining instream attainment of water quality standards for pH, appropriate averaging periods may be applied, provided that beneficial uses will be fully protected.
- (d) All mercury standards apply to the total recoverable fraction of all forms, both organic and inorganic, of mercury in water.
- (e) All ammonia, nitrate, and nitrite standards are based upon the concentration reported as nitrogen.

33.7 - 33.9 RESERVED

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33.62 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; JUNE 10, 2019 RULEMAKING; FINAL ACTION AUGUST 12, 2019; EFFECTIVE DATE DECEMBER 31, 2019

The provisions of C.R.S. 25-8-202(1)(a) and (b); 25-8-203; 25-8-204; and 25-8-402 C.R.S., 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

A. Water Body Segmentation

Some segments were renumbered, combined, or new segments were created to facilitate appropriate organization of water bodies in this regulation. Renumbering and/or creation of new segments was made based on information that showed: a) the original reason for segmentation no longer applied; b) significant differences in uses, water quality and/or physical characteristics warrant a change in standards on only a portion of the existing segment; and/or c) certain segments could be merged into one segment because they had similar water quality and uses. The following changes were made:

Upper Colorado segments 5 and 6a: The mainstem of Willow Creek from the outlet of Willow Creek Reservoir to the confluence with the Colorado River was moved from Segment 6a to a new Segment 5 to facilitate adoption of appropriate temperature standards. New Segment 5 was assigned CS-II temperature standards. Segment 6a retained CS-I temperature standards.

Upper Colorado segments 6b and 6c: Segments 6b and 6c were combined into Segment 6b to facilitate improved organization of the regulation and adoption of appropriate standards to protect the Aquatic Life use. Existing standards on Segment 6c were retained for the new Segment 6b.

Upper Colorado segments 7b and 7c: Tributaries to Muddy Creek from the inlet of Wolford Mountain Reservoir to the outlet of the reservoir and Blacktail Creek were moved from Segment 7c to Segment 7b to facilitate adoption of a Recreation E use classification and standards on these tributaries.

Upper Colorado segments 7b and 7d: The mainstem of Muddy Creek from the outlet of Wolford Mountain Reservoir to the confluence with the Colorado River was moved from Segment 7b to a new Segment 7d to facilitate adoption of appropriate temperature standards and to remove the Water Supply use. Segment 7b retained CS-I temperature standards and the Water Supply use. Segment 7d was assigned CS-II temperature standards with no Water Supply use.

Blue River segments 4a and 5: Soda Creek from the source to Dillon Reservoir was moved from Segment 5 to Segment 4a to facilitate improved organization of the regulation. Segment 5 was previously included as an exception to Segment 4a, but the uses and standards were the same for both segments. Segment 5 was deleted.

Roaring Fork segments 3a and 3c: Three Mile Creek, including all tributaries and wetlands, from the source to the confluence with the Roaring Fork River was moved from Segment 3c to Segment 3a to facilitate adoption of appropriate temperature standards. Segment 3c retained CS-II temperature standards. Segment 3a retained CS-I temperature standards.

Yampa River segments 7a and 7b: Segment 7 was divided into Segments 7a and 7b to facilitate removal of the Water Supply use from a portion of the segment. The Water Supply use was removed from Segment 7a and Segment 7b retained the Water Supply use.

Segment descriptions were also edited to improve clarity, correct typographical errors, and correct spelling errors. These changes are listed in Section M.

B. Aquatic Life Use Classifications and Standards

Some segments assigned an Aquatic Life use classification were missing a standard to protect that use. The commission adopted the missing standards for the following segments:

[List to be completed following preliminary final action by the commission.]

The commission reviewed information regarding the existing aquatic communities. No segments were lacking an Aquatic Life use, but Class 2 segments with high MMI scores or a wide variety of fish species were upgraded from Class 2 to Class 1.

The following segments were upgraded from Cold 2 to Cold 1:

[List to be completed following preliminary final action by the commission.]

The commission reviewed all Class 2 segments that have fish that are “of a catchable size and which are normally consumed and where there is evidence that fishing takes places on a recurring basis.” Water + Fish or Fish Ingestion standards were applied to the following segments:

[List to be completed following preliminary final action by the commission.]

C. Recreation Use Classifications and Standards

The commission reviewed information regarding the current Recreation use classifications and evidence pertaining to actual or potential primary contact recreation. In addition, newly created segments were given the same Recreation use classification as the segment from which they were split, unless there was insufficient evidence to support keeping that classification, or evidence to show that the existing use classification was inappropriate.

Based upon evidence that portions of these segments are publicly accessible and located in a developed area where there is easy access for children, it was determined that primary contact recreation is expected to occur. The following segments with a Recreation N use classification and standards were upgraded to Recreation E:

[List to be completed following preliminary final action by the commission.]

Based upon evidence that portions of these segments are publicly accessible and/or accessible to families who live in the area or visitors to public recreation lands in these segments, it was determined that primary contact recreation is expected to occur, including water play by children. The following segments with a Recreation U use classification and standards were upgraded to Recreation E:

[List to be completed following preliminary final action by the commission.]

During the 2008 hearing, the commission created Segment 20a and adopted a Recreation U classification after it was determined that a lack of reasonable inquiry had been completed and no use attainability analysis was completed. The segment description specified endpoints; however, the beginning of the segment was ambiguous. It has since been identified that tributaries to the Yampa River from above the confluence with the Elk River on National Forest lands were not explicitly included in any segments. The description for Segment 20a has been amended to include this omission, and the recreation use was upgraded to Recreation E to protect existing primary contact recreation on this segment.

D. Water Supply Use Classification and Standards

The commission added a Water Supply use classification and standards where the evidence demonstrated a reasonable potential for a hydrological connection between surface water and alluvial wells used for drinking water. The Water Supply use classification and standards were added to the following segments:

[List to be completed following preliminary final action by the commission.]

The commission removed the Water Supply use classification and standards where the evidence demonstrated that a Water Supply use does not currently exist due to flow or other conditions, and that such a use is not reasonably expected in the future due to water rights, source water options, or other conditions. The Water Supply standard for chloride was retained for these segments, given concerns regarding the protection of aquatic life by the existing Water Supply standards. The Water Supply use classification and standards, except for chloride, were removed from the following segments:

[List to be completed following preliminary final action by the commission.]

For the segments where the Water Supply use classification and standards were removed, the commission retained the 250 mg/L chronic (30-day average) standards for chloride as an interim step, based on evidence presented demonstrating the toxic effects of chloride on aquatic life. Retaining the current chloride standard is necessary to protect the assigned Aquatic Life uses and to ensure that these waters are free from substances toxic to aquatic life in accordance with 31.11(1)(a)(iv). The commission retained the numeric standard for chloride because narrative standards have often proved challenging to implement, and interim numeric standards will provide implementable interim standards while allowing time for development of robust replacement criteria based on the latest scientific information.

The commission recognizes that there is scientific uncertainty about the appropriate standards for chloride and/or sulfate to protect the Aquatic Life use, and that appropriate standards may need to recognize that toxicity is affected by site water characteristics (similar to the influence of hardness on the toxicity of dissolved metals). The commission's intention is that future revisions to the numeric standards assigned to these segments, and also to Regulation No. 31 (i.e., aquatic life-based table values chloride and/or sulfate), can be considered if: (1) EPA issues new or updated CWA § 304(a) Aquatic Life criteria recommendations, (2) another state adopts new or revised Aquatic Life criteria and EPA approves, or (3) protective criteria otherwise become available that incorporate the latest scientific information on the risks to aquatic life posed by these pollutants.

Some segments assigned a Water Supply use classification were missing a standard to protect that use. The commission adopted the missing standards for the following segments:

[List to be completed following preliminary final action by the commission.]

E. Agriculture Use Classification and Standards

The commission reviewed the single segment lacking an Agriculture use. Based on an evaluation of the available data and information, no changes were adopted at this time.

Some segments assigned an Agriculture use classification were missing a standard to protect that use. The commission adopted the missing standards for the following segments:

[List to be completed following preliminary final action by the commission.]

F. Other Standards to Protect Agriculture, Aquatic Life, and Water Supply Uses

- 1. Molybdenum:** In 2010, the commission adopted a new standard for molybdenum to protect cattle from the effects of molybdenosis. The table value adopted at that time was 300 µg/L, but included an assumption of 48 mg/day of copper supplementation to ameliorate the effects of molybdenosis. State and local experts on cattle nutrition indicated that copper supplementation in the region is common, but is not universal. Therefore, the copper supplementation assumption was removed from the equation, which then yielded a standard of 160 µg/L. That standard was applied in recent basin reviews.

In the 2015 Regulation No. 38 hearing, the commission adopted a standard of 150 µg/L, based on an improved understanding of the dietary- and water-intake rates for various life-

stages of cattle. This standard is protective of all life-stages of cattle (including lactating cows and growing heifers, steers and bulls) at all times of year.

The Agriculture table value assumes that the safe copper:molybdenum ratio is 4:1. Food and water intake is based on growing heifers, steers, and bulls consuming 6.7 kg/day of dry matter and 56.8 liters of water per day. Molybdenum supplementation is assumed to be zero. The table value standard (TVS), which considers total copper and molybdenum intakes, is calculated from the following equation:

$$\text{Mo TVS} = \frac{(\text{Cu}_{\text{forage}} \times \text{Forage}_{\text{intake}}) + (\text{Cu}_{\text{water}} \times \text{Water}_{\text{intake}}) + \text{Cu}_{\text{supp}}}{\text{Cu:Mo Safe Ratio}} - (\text{Mo}_{\text{forage}} \times \text{Forage}_{\text{intake}})$$

The assumed values for these equations are as follows:

$\text{Cu}_{\text{forage}} = 7 \text{ mg/kg}$, $\text{Forage}_{\text{intake}} = 6.7 \text{ kg/day}$, $\text{Cu}_{\text{water}} = 0.008 \text{ mg/L}$, $\text{Water}_{\text{intake}} = 56.8 \text{ L/day}$, $\text{Cu}_{\text{supplementation}} = 0 \text{ mg/day}$, $\text{Cu:Mo Safe Ratio} = 4:1$, $\text{Mo}_{\text{forage}} = 0.5 \text{ mg/kg}$.

In 2010, the commission also adopted a new standard for molybdenum to protect the Water Supply use that was calculated in accordance with Policy 96-2.

A molybdenum standard of 150 µg/L was adopted for all segments in Regulation No. 33 that have an Agriculture use classification, and where livestock or irrigated forage are present or expected to be present.

The following segments (or portions of segments) have an Agriculture use classification and a Water Supply use, but livestock watering does not occur. A molybdenum standard of 210 µg/L was retained on these segments to protect the Water Supply use:

[List to be completed following preliminary final action by the commission.]

The following segment has an Agriculture use classification, but livestock watering does not occur. A numeric molybdenum standard does not apply to this segment. Instead, a narrative standard applies to protect the Water Supply use in downstream waters.

[List to be completed following preliminary final action by the commission.]

The following segment has an Agriculture use classification, but a site-specific molybdenum standard has been previously adopted. The site-specific molybdenum standard of 190 µg/L was retained on this segment to protect the Agriculture use:

[List to be completed following preliminary final action by the commission.]

- 2. Cadmium for Aquatic Life:** The commission adopted updated hardness-based cadmium Aquatic Life standards on a targeted, site-specific basis in cold waters to reflect the most up-to-date science. The new standards, released by the U.S. Environmental Protection Agency (EPA) in March 2016, are protective of sensitive cold water aquatic life (i.e., trout). The cadmium criteria recommended by EPA and adopted by the commission are as follows:

$$\text{Acute} = e^{(0.9789 \cdot \ln(\text{hardness}) - 3.866)} \cdot (1.136672 - (\ln(\text{hardness}) \cdot 0.041838))$$

$$\text{Chronic} = e^{(0.7977 \cdot \ln(\text{hardness}) - 3.909)} \cdot (1.101672 - (\ln(\text{hardness}) \cdot 0.041838))$$

EPA's updated cadmium criteria are less stringent than Colorado's current cadmium standards when water hardness is greater than 45 mg/L CaCO₃. Although the criteria are less stringent, they were developed using the latest science and are protective of aquatic life, and it is expected that Colorado's state-wide cadmium standards will likely be updated using the 2016 EPA cadmium criteria at a later date. Therefore, the commission determined it was appropriate to adopt the new criteria for waters known to be impaired for cadmium to ensure forthcoming clean-up goal development and Total Maximum Daily Load (TMDL) evaluations are based on the most relevant water quality standards available. The updated cadmium standards were adopted for the following segments:

[List to be completed following preliminary final action by the commission.]

- 3. Cadmium, Nickel, and Lead for Water Supply:** A review of the cadmium, nickel, and lead standards showed that uses were not always adequately protected by the standards currently in the tables. Depending on hardness, the Aquatic Life standards for cadmium, lead, and nickel were not protective of the Water Supply use. The division reviewed all segments in Regulation No. 33 to determine if the current standards applied to each segment are fully protective of the assigned uses, and revised or added standards where appropriate.

The cadmium Water Supply standard was added because the acute Aquatic Life standard is not protective when the hardness was greater than 200 mg/L in non-trout streams and 345 mg/L in trout streams; the lead Water Supply standard was added because the acute Aquatic Life standard is not protective when hardness is greater than 79 mg/L; and the nickel Water Supply standard was added because the chronic Aquatic Life standard is not protective when hardness is greater than 216 mg/L. Cadmium, lead, and nickel Water Supply standards were added to the following segments:

[List to be completed following preliminary final action by the commission.]

- 4. Aquatic Life Criteria for Selenium, Ammonia, and Aluminum:** The commission declined to adopt EPA's revised 304(a) Aquatic Life criteria for selenium, ammonia, and aluminum at this time; however, the division is committed to evaluating these new criteria. Studies are currently underway for each parameter to improve understanding of these criteria in the context of water quality conditions in Colorado and how these criteria may be adopted and implemented in Colorado in the future.

G. Antidegradation Designations

The commission reviewed all segments designated Use Protected to determine if the Use Protected designation was still warranted. Based upon available water quality data that meet the criteria of 31.8(2)b, the Use Protected designation was not removed from any segments.

The commission reviewed all segments designated Reviewable to determine if the Reviewable designation was still warranted. Based upon available water quality data that fails to meet the criteria of 31.8(2)b, the Reviewable designation was not removed from any segments.

H. Ambient Quality-Based and Site-Specific Criteria-Based Standards

Ambient quality-based standards are adopted where a comprehensive analysis has been conducted demonstrating that elevated existing water quality levels are the result of natural conditions or are infeasible to reverse, but are adequate to protect the highest attainable use. All existing ambient-based standards were reviewed and no revisions were made.

Ambient-based standards were deleted from the following segment:

Blue River Segment 11: “Existing quality” standards for cadmium, lead and zinc were replaced with table value standards. An assessment of recent water quality data show that lead concentrations are achieving table value standards in French Gulch. The commission recognizes that TVS is not currently attainable for cadmium and zinc, but that reductions in concentrations and loading in the watershed may be feasible within 20 years.

In 2003, in addition to the “existing quality” standards adopted on Segment 11, site-specific numeric standards were adopted on Blue River segments 2a and 2b. The 4 µg/L cadmium standard on Segment 2a was described as a “CERCLA treatment target concentration” (NWCCOG Rebuttal Statement) and as such the commission encourages review of that standard. By contrast, the zinc standards on Segment 2a and cadmium and zinc standards on Segment 2b were intended to protect different life stages of brown trout expected to occur. Because additional toxicity data have become available for both cadmium and zinc, there is a need to review whether updated recalculation-based site-specific standards would be more appropriate to protect the species expected to occur in this portion of the Blue River. No changes were proposed or adopted for Blue River segments 2a and 2b in this rulemaking hearing.

The 2016 revisions to Regulation No. 31 provide that where sources and causes of elevated pollutant levels are determined to be attributable to anthropogenic activity, a comprehensive alternatives analysis must be conducted to identify the extent to which conditions could be improved from implementing feasible pollution controls. Substantial anthropogenic impacts have been identified in French Gulch; however, adequate supporting information is not available to determine the feasibility to reverse anthropogenic impacts and identify the highest attainable water quality condition and use.

Concerns remain over long term conditions in lower French Gulch, and impacts to fisheries downstream on the Blue River in segments 2a and 2b. With the action of reverting cadmium and zinc to TVS for French Gulch, the long-term goal is to set standards reflective of highest attainable conditions for these waters.

The commission encourages the division and other interested stakeholders, which include EPA, CPW, and local governments, to work collaboratively prior to the next basin review to identify the highest attainable use, the numeric standards necessary to protect that use, and whether it is feasible to achieve those water quality levels in French Gulch and the Blue River.

The commission reviewed all other existing site-specific standards. Based on an evaluation of the available data and information, no additional changes were adopted at this time.

I. Temporary Modifications

All existing temporary modifications were examined to determine if they should be allowed to expire or if they should be extended, either unchanged or with changes to the numeric limits.

The commission deleted temporary modifications on the following segments:

[List to be completed following preliminary final action by the commission.]

To remain consistent with the commission’s decisions regarding arsenic in section 33.50, all existing temporary modifications for arsenic of “As(ch)=hybrid” (expiration date of 12/31/21) were retained. In addition, for the following segments, an arsenic temporary modification was adopted for the 0.02 µg/L Water + Fish numeric standard in recognition of the uncertainty regarding “the water quality standard necessary to protect current and/or future uses” (31.7(3)). For arsenic, a known human carcinogen, the uncertainty is multi-faceted. For example, there are unresolved questions about existing water quality conditions (including spatial and temporal variation), the sources and causes of any numeric standard exceedances, and to what extent existing conditions may be a result of natural or irreversible sources. Likewise, with reference to the equations used to calculate the Water + Fish, Water Supply, and Fish

Ingestion table value standards for arsenic (Policy 96-2), there are unresolved questions about the cancer slope, the bioconcentration or bioaccumulation factor, and the percentage of total arsenic in fish tissue that is inorganic. The commission recognizes the need to resolve the uncertainty in the arsenic standards and ensure that human health is adequately protected. Temporary modifications for arsenic were added to the following segments:

[List to be completed following preliminary final action by the commission.]

J. Temperature Standards for Rivers and Streams

The commission revised temperature criteria in Regulation No. 31 in 2007, and again in 2010, based on the development of the Colorado Temperature Database and a lengthy stakeholder process. In 2014, the new temperature standards were adopted for all segments with an Aquatic Life use classification in Regulation No. 33. In June 2016, temperature criteria in Regulation No. 31 were further revised, including changes to the temperature table value standards, revision of warm water winter acute standards, and the addition of footnotes to protect lake trout and mountain whitefish.

- 1. Colorado Temperature Database Update:** The Colorado Temperature Database was updated in 2016 to reflect the most recent research regarding the thermal requirements of Colorado's fishes, which allowed for adoption of an overall update of the cold and warm water acute and chronic temperature table value standards. In this hearing, the commission adopted revisions at 33.6(3) to bring this regulation into conformity with the revised table value standards found in Table I of Regulation No. 31.
- 2. Warm Water Winter Acute Table Values:** The 2016 updates to the temperature database also allowed for the adoption of revisions to the warm water winter acute table values. When seasonal numeric temperature standards were first adopted in 2007, warm water winter acute and chronic standards were simply set at half the summer season table values, recognizing a pattern seen in cold waters. In 2016, the acute winter table values for warm water fish were revised based on lethal temperature thresholds established in laboratory experiments for fish acclimated to "winter" temperatures. Standards derived using this new method more accurately protect warm water fish from acute thermal effects in winter. In this hearing, the commission adopted revisions at 33.6(3) to bring this regulation into conformity with the revised warm water winter acute temperature table value standards found in Table I of Regulation No. 31.
- 3. Mountain Whitefish and Lake Trout Footnotes:** In 2016, the commission adopted two footnotes to Table I of Regulation No. 31 to allow for additional thermal protection of mountain whitefish and lake trout where appropriate. These species were given special summer standards due to their thermal sensitivity and limited distributions. Lake trout occur in only a small number of lakes and reservoirs, and thermally-sensitive early life stages of mountain whitefish are known to occur only in certain cold waters during certain times of the year.

While early life stages of mountain whitefish are known to be the most thermally-sensitive, the time period these early life stages occur can vary from site to site. Mountain whitefish spawn in the fall, but timing of spawning, incubation, and emergence all depend on a variety of site-specific factors, including water temperature. The incubation period takes longer when water is colder, and that will delay hatching, emergence, and migration of fry. Depending on when spawning occurs and the water temperature in which the eggs are spawned and incubated, the incubation period could last through late spring.

Based on information provided by Colorado Parks and Wildlife (CPW), thermally-sensitive early life stages of mountain whitefish occur in certain water bodies in Regulation No. 33. Spawning begins in October and the fry life stage is complete by May in these water bodies. Therefore, only limited application of the mountain whitefish summer temperature standards to protect eggs, larvae, and fry is necessary.

In segments currently assigned CS-I temperature standards, the application of the mountain whitefish summer temperature standards is not necessary. The winter season included in CS-I temperature standards (i.e., October to May) is expected to cover the period when mountain whitefish early life stages are expected to occur (i.e., October to May). In addition, the CS-I winter standards are more stringent than the mountain whitefish summer standards. Therefore, because the CS-I temperature standards are protective of mountain whitefish early life stages, the commission did not adopt the mountain whitefish summer standards on segments with CS-I temperature standards in Regulation No. 33. While the commission made no changes to the temperature standards, mountain whitefish spawning and early life stages are known to occur in the following CS-I segments:

[List to be completed following preliminary final action by the commission.]

The commission adopted standards to protect mountain whitefish on a season- and site-specific basis where information provided by CPW biologists indicated that thermally-sensitive early life stages of mountain whitefish are known to occur. CS-II summer temperature standards typically apply from April to October. Because mountain whitefish spawning and early life stages are expected to occur from October to May, the mountain whitefish summer temperature standards were applied for the months of April, May, and October. The CS-II table value standards were retained for the remainder of the summer (i.e., June through September). Standards to protect mountain whitefish were not adopted where a site-specific temperature standard was in place. Temperature standards to protect mountain whitefish were applied to the following CS-II segments for the months of April, May, and October:

[List to be completed following preliminary final action by the commission.]

In this hearing, the commission adopted standards to protect lake trout on a site-specific basis where information provided by CPW indicated that this species occurs and protection from thermal impacts is appropriate. Lake trout standards were not adopted where a site-specific temperature standard was in place. For cold lakes, the acute standard was retained as it is more protective than the acute lake trout standard. Temperature standards to protect lake trout were applied to the following segments:

[List to be completed following preliminary final action by the commission.]

- 4. Refinement of Temperature Standards:** Since temperature criteria were revised in Regulation No. 31 in 2007, the division and others have worked to ensure that appropriate temperature standards were adopted for segments throughout the state. At times, this effort to assign temperature standards has also included reevaluation of the existing Aquatic Life use classifications, and use revisions have been proposed and adopted where appropriate. Incremental progress continues as temperature standards are refined based on the experience and data gains that have occurred since initial adoption of temperature standards.

In the 2016 Regulation No. 31 hearing, the commission declined to adopt the division's proposal for statewide solutions for temperature transition zones and shoulder seasons, in favor of a basin-by-basin consideration of temperature standards on a site-specific basis. The basin-by-basin approach was selected as it allows for consideration of temperature attainability and ambient quality-based site-specific temperature standards issues in the context of multiple lines of evidence and site-specific contravening evidence. The sections below describe the considerations and methods used to develop and support the site-specific temperature standards revisions adopted in this basin hearing.

- i. **Existing Uncertainty:** While a great deal of progress has been made regarding the development and implementation of temperature standards, uncertainty still remains for some segments due to the lack of site-specific temperature or aquatic community information or conflicts between the lines of evidence. To address the uncertainty, additional data collection

has been conducted where possible, and all new information collected since the last basin review was evaluated.

- ii. Attainability: Following the commission's 2016 direction to consider attainability issues using a basin-by-basin approach, the division reviewed all available information to identify segments where attainability issues may exist based upon available instream temperature data and expected in-stream summer maximum weekly average temperatures (MWATs). Expected MWATs were determined using regression analysis of temperature and elevation and the NorWeST Stream Temperature Regional Database and Model. This screening found that many segments, or portions of segments, were not expected to attain the summer or winter chronic temperature standards. These waters were targeted for additional review, as were waters listed as impaired for temperature on the 2016 303(d) List.
- iii. Aquatic Life Use: For these selected segments, the division conducted a comprehensive, site-specific review of the existing use classification and temperature standards. Fishery data provided by CPW was evaluated to identify fish species expected to occur, whether reproduction is expected (i.e., stocked, transient, or resident species), age class structures, and any other relevant information regarding aquatic life communities. For segments where little or no information on fish species expected to occur existed, fish population data from adjacent and representative water bodies was utilized when possible.
- iv. Thermal Drivers: In cases where temperature standards to protect the highest attainable use were determined, but the temperature standards were not attainable, site-specific factors that influence in-stream temperature were evaluated to identify any correctable anthropogenic thermal sources. All available data on temperature, hydrology, hydro-modification, canopy cover, groundwater influence, point and non-point thermal sources, and other relevant information was reviewed.

Temperature standards have been implemented and reviewed in Regulation No. 33 during three triennial reviews - 2008, 2014, 2018. The level of emphasis and effort dedicated to understanding the aquatic community and temperature standards implementation during these reviews has resulted in a great deal of progress and application of appropriate temperature standards across the basin. Accordingly, fewer site-specific temperature standards and/or corresponding Aquatic Life use revisions were necessary compared to previous basin reviews.

Based upon information regarding the species expected to occur, temperature data, physical habitat, land cover/use, groundwater inputs, flow conditions, and all other available information regarding thermal drivers, the commission adopted revisions of temperature standards for the segments listed below where water quality is not feasible to improve or where the thermal regime is the result of natural conditions, but is sufficient to protect the highest attainable use.

The following segments were changed from CS-II to CS-I:

[List to be completed following preliminary final action by the commission.]

The following segments were changed from CS-I to CS-II:

[List to be completed following preliminary final action by the commission.]

Moving forward with this site-specific approach, the commission encourages the division to consider whether any additional information would be appropriate to be included in the use attainability analyses.

K. Other/Site-Specific Revisions

[To be completed following preliminary final action by the commission.]

L. Standards Corrections and Clarifications

- 1. Duration of Nitrite Standard:** The commission corrected the duration of the nitrite standard from chronic to acute on all segments. When the commission adopted the new format for tables in 2016, all nitrite standards were incorrectly included in the “chronic” standards column.
- 2. Uranium:** To improve the clarity of the regulation, the commission included references to the basin-wide uranium standards at 33.5(3) in the Appendix 33-1 tables. For the acute and chronic uranium standards for all segments, the commission included a reference to 33.5(3) to clarify that the basic standard at 33.5(3) applies to all waters in Regulation No. 33. Because these standards already applied basin-wide, there is no practical effect of this change.
- 3. Mercury:** To improve the clarity of the regulation, the commission added Total Recoverable notation (T) to the mercury Aquatic Life and Water Supply standards. The standards apply to the total recoverable fraction of all forms, both organic and inorganic, of mercury in water. Multiple forms of mercury exist in the environment and these forms differ dramatically in both their potential to cause toxic effects and their availability for uptake by organisms. Certain aquatic conditions can lead to the conversion to the highly bioaccumulative, toxic, organic form (methylmercury). The mercury standards are designed to provide protection from the accumulation of those toxic forms and therefore, the standards address all forms of mercury. The addition of the Total Recoverable notation does not represent a change in current Colorado policy or procedures.

M. Correction of Typographical and Other Errors and Segmentation Clarification

The following edits were made to segment descriptions to improve clarity and correct typographical errors:

- The formatting of the tables in Appendix 33-1 was modified to include only parameters that have been adopted in a majority of segments. The tables include rows for physical and biological, inorganic and metals for all parameters which the commission commonly adopts into segments. In segments where there is no numeric standard for a commonly adopted parameter, a blank row for that parameter is included to show the commission's site-specific decision not to adopt a numeric standard for that parameter. The commission removed beryllium and aluminum from all segments where no standard has been adopted, because these parameters have only been adopted on a site-specific basis, rather than basin-wide.
- An acronym list was added to the front of Appendix 33-1 to improve the clarity and usability of the tables.
- Information was added at 33.6(5) specifying that the ammonia, nitrate, and nitrate standards are to be reported as nitrogen. This is consistent with the description of the standards as they are included in Table II of Regulation No. 31.
- The segment descriptions in Appendix 33-1 were reviewed, and minor revisions were made to several segments to correct grammar, punctuation, and typos. The purpose of these changes was to improve clarity and consistency of the segment descriptions.
- Revisions were made to the sentence structure of these segments. The purpose of these changes was to improve clarity and consistency of the segment descriptions.

Upper Colorado River: 7c
North Platte River: 4b

- Coordinates were added to the segment descriptions to facilitate location of segment boundaries.

Upper Colorado River: 6b, 10a
Blue River: 2a, 2b, 10, 11, 13

Eagle River: 2, 3, 5a, 5b, 6, 7a, 7b

Roaring Fork River: 3b

North Platte River: 4b

Yampa River: 6, 7, 11, 13g, 20b

- Upper Colorado River Segment 1: The segment description was amended for clarity and consistency.
- Upper Colorado River Segment 2: An exception for Segment 5 was added to reflect a new segment.
- Upper Colorado River Segment 4: The exception for Segment 1 was removed for clarity.
- Upper Colorado River Segment 6a: The segment description was amended for clarity.
- Upper Colorado River Segment 7a: An exception for Segment 7d was added to reflect a new segment.
- Upper Colorado Segment 10a: An exception for Segment 2 was added to correct a previous omission.
- Upper Colorado Segment 11: The segment description was amended for clarity.
- Upper Colorado Segment 13: The segment description was amended for clarity.
- Blue River segments 2a and 2b: The reference to Summit County Road 3 was removed and replaced with Coyne Valley Road to improve clarity.
- Blue River Segment 4a: Wetlands were added to the segment description to correct a previous omission. Exceptions for Segments 2c, 6a, and 16 were added, and the exception for Segment 5 was removed.
- Blue River Segment 12: The arsenic standard was corrected from 0.02 µg/l to 0.02-10 µg/l to reflect the existing uses.
- Blue River Segment 21: The segment description was amended for clarity and consistency.
- Eagle River Segment 3: An exception for Segment 4 was added to correct a previous omission.
- Eagle River segments 7a and 7b: Minturn Middle School was replaced with Minturn Water Facility in the segment description to reflect a current landmark. The middle school is no longer in operation. The exception for Segment 1 was removed to correct a previous error.
- Eagle River segments 8, 9a and 9b: Dates for temperature table value standards were added to clarify the temperature standards that are effective outside of seasonal site-specific standards. The asterisk was removed from the daily maximum on Segments 8 and 9a to clarify the CS-I table value is applicable. A note was added to the daily maximum on 9b to clarify seasonal standards are effective.
- Eagle River Segment 12: An exception for Segment 1 was added for clarity.
- Eagle River Segment 13: The segment description was amended for clarity.
- Roaring Fork River Segment 3a: The exception for Segment 3c was removed to reflect Three Mile Creek is now included in Segment 3a, and the exception for Segment 10 was changed to 10b to reflect current segmentation.
- Roaring Fork River Segment 5: An exception for Segment 1 was added to correct a previous omission.
- Roaring Fork River Segment 7: The segment description was amended for clarity.
- Roaring Fork River Segment 8: Exceptions for Segments 10a and 10b were added to reflect current segmentation.
- Roaring Fork River Segment 11: The segment description was amended for clarity.
- North Platte River Segment 4a: The source of the segment was added for clarity, and exceptions for Segments 5a and 5b were added to correct previous omissions.
- North Platte River Segment 7a: The reference to the outlet of Spring Creek Reservoir was removed to reflect current segmentation.
- North Platte River Segment 8: The segment description was amended for clarity.
- North Platte River Segment 9: The site-specific MWAT standard for Lake John was corrected to from 1.2 to 21.2 to reflect the standard adopted by the commission in 2014.

- Yampa River Segment 2a: The segment description was amended for clarity. The mainstem of the Yampa River begins at the confluence of the Bear River and Phillips Creek.
- Yampa River Segment 3: An exception was added for Segment 1, and exceptions for segments 8, 13a-f and 19 were removed to improve clarity.
- Yampa River Segment 4: The nutrient note was added to correct a previous omission.
- Yampa River Segment 5: The segment description was amended to improve clarity. Chimney Creek becomes Phillips Creek prior to reaching the Yampa River.
- Yampa River Segment 8: The segment description was amended for clarity. The West Fork Elk River originates at the Elk River and confluences with the Yampa River. Previously it was unclear if the West Fork was included with the Elk River in Segment 8. The exception for 20b was removed to correct a previous error.
- Yampa River Segment 12: An exception was added for Segment 8 and 20a to improve clarity and consistency.
- Yampa River Segment 13a: The segment description was amended to improve clarity and consistency with Segments 13b and 13c. Over time tributaries to Trout Creek have been moved to other segments, and it was unclear which tributaries to Trout Creek were included in 13a.
- Yampa River Segment 13b: The segment description was amended for clarity. Wetlands were added to Fish Creek and Middle Creek to correct a previous omission. The erroneous trout standards were removed. The assessment location and temporary modification language was amended for clarity.
- Yampa River Segment 13c: The segment description was amended for clarity and consistency with 13a and 13b. The boundary for tributaries to Trout Creek was moved from County Road 179 approximately 1500 feet downstream to the confluence with Fish Creek to improve clarity.
- Yampa River Segment 13d: The assessment location language was amended for clarity.
- Yampa River Segment 13e: The assessment location language was amended for clarity.
- Yampa River Segment 13g: The segment description was amended for clarity. Cow Camp Creek is an informal name not included on maps. The erroneous trout standards were removed.
- Yampa River Segment 13h: The spaces for total cadmium and total silver were removed from the table to correct a formatting error.
- Yampa River Segment 13i: The temporary modification and assessment location language were modified for clarity.
- Yampa River Segment 13j: The seasonal qualifier for selenium was removed to reflect selenium standards as adopted by the commission.
- Yampa River Segment 14: The segment description was amended for clarity.
- Yampa River Segment 15: The segment description was amended for clarity. Dry Fork Elkhead Creek confluences with Elkhead Creek prior to the Yampa River. The erroneous trout standards were removed.
- Yampa River Segment 18: The segment description was amended for clarity. The mainstem of the Little Snake River is also within the Lower Colorado River basin. The new description clarifies tributaries within Segment 18 that are within the Upper Colorado River basin.
- Yampa River Segment 20a: This segment description was amended to clarify the beginning of the segment is upstream of the confluence with the Elk River. Previously, tributaries to the Yampa River from above the confluence with the Elk River on National Forest land were not explicitly included in any segment, and 20a was inconsistently applied to National Forest lands.
- Yampa River Segment 23: The erroneous trout standards were deleted.

**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 ~~06/30/2019~~12/31/2019

Abbreviations and Acronyms

<u>Aq</u>	=	<u>Aquatic</u>
<u>°C</u>	=	<u>degrees Celsius</u>
<u>CL</u>	=	<u>cold lake temperature tier</u>
<u>CLL</u>	=	<u>cold large lake temperature tier</u>
<u>CS-I</u>	=	<u>cold stream temperature tier one</u>
<u>CS-II</u>	=	<u>cold stream temperature tier two</u>
<u>D.O.</u>	=	<u>dissolved oxygen</u>
<u>DM</u>	=	<u>daily maximum temperature</u>
<u>DUWS</u>	=	<u>direct use water supply</u>
<u>E. coli</u>	=	<u><i>Escherichia coli</i></u>
<u>EQ</u>	=	<u>existing quality</u>
<u>mg/L</u>	=	<u>milligrams per liter</u>
<u>mg/m²</u>	=	<u>milligrams per square meter</u>
<u>mL</u>	=	<u>milliliter</u>
<u>MWAT</u>	=	<u>maximum weekly average temperature</u>
<u>OW</u>	=	<u>outstanding waters</u>
<u>sc</u>	=	<u>sculpin</u>
<u>SSE</u>	=	<u>site-specific equation</u>
<u>T</u>	=	<u>total recoverable</u>
<u>t</u>	=	<u>total</u>
<u>tr</u>	=	<u>trout</u>
<u>TVS</u>	=	<u>table value standard</u>
<u>µg/L</u>	=	<u>micrograms per liter</u>
<u>UP</u>	=	<u>use-protected</u>
<u>WS</u>	=	<u>water supply</u>
<u>WS-I</u>	=	<u>warm stream temperature tier one</u>
<u>WS-II</u>	=	<u>warm stream temperature tier two</u>
<u>WS-III</u>	=	<u>warm stream temperature tier three</u>
<u>WL</u>	=	<u>warm lake temperature tier</u>

REGULATION #33 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Upper Colorado River Basin

1. Mainstem of the Colorado River, including all tributaries and wetlands, within <u>Rocky Mountain National Park, or which flow or flowing</u> into Rocky Mountain National Park.						
COUCUC01	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT			
OW	Aq Life Cold 1	CS-I	CS-I	acute	chronic	
	Recreation E	acute	chronic	Aluminum	---	
	Water Supply			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)
Arsenic(chronic) = hybrid		chlorophyll a (mg/m ²)	---	150	Cadmium(T)	5.0
Expiration Date of 12/31/2021		E. Coli (per 100 mL)	---	126	Chromium III	---
*Uranium(acute) = See 33.5(3) for details.		Inorganic (mg/L)			Chromium III(T)	50
*Uranium(chronic) = See 33.5(3) for details.					Chromium VI	TVS
					Copper	TVS
					Iron	---
					Iron(T)	---
					Lead	TVS
					Lead(T)	50
					Manganese	TVS
					Mercury(T)	---
					Molybdenum(T)	---
					Nickel	TVS
					Nickel(T)	---
					Selenium	TVS
					Silver	TVS
					Uranium	--varies*
					Zinc	TVS

2. Mainstem of the Colorado River, including all tributaries and wetlands, within, or flowing into Arapahoe National Recreation Area, <u>except for the specific listing in Segment 5.</u>						
COUCUC02	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT			
Reviewable	Aq Life Cold 1	CS-I	CS-I	acute	chronic	
	Recreation E	acute	chronic	Aluminum	---	
	Water Supply			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)
Arsenic(chronic) = hybrid		chlorophyll a (mg/m ²)	---	150	Cadmium(T)	5.0
Expiration Date of 12/31/2021		E. Coli (per 100 mL)	---	126	Chromium III	---
*Uranium(acute) = See 33.5(3) for details.		Inorganic (mg/L)			Chromium III(T)	50
*Uranium(chronic) = See 33.5(3) for details.					Chromium VI	TVS
					Copper	TVS
					Iron	---
					Iron(T)	---
					Lead	TVS
					Lead(T)	50
					Manganese	TVS
					Mercury(T)	---
					Molybdenum(T)	---
					Nickel	TVS
					Nickel(T)	---
					Selenium	TVS
					Silver	TVS
					Uranium	--varies*
					Zinc	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 33.6 for further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #33 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Upper Colorado River Basin

3. Mainstem of the Colorado River from the outlet of Lake Granby to <u>below</u> the confluence with <u>the</u> Roaring Fork River.							
COUCUC03	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT				
Reviewable	Aq Life Cold 1 Recreation E Water Supply	Temperature °C	<u>varies*CS-II</u>	<u>varies*CS-II</u>	acute	chronic	
Qualifiers:		acute	chronic	Aluminum	---	---	
		D.O. (mg/L)	---	6.0	Arsenic	340	---
Other:	Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2021 *chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 33.5(4). *Phosphorus(chronic) = applies only above the facilities listed at 33.5(4). <u>*Uranium(acute) = See 33.5(3) for details.</u> <u>*Uranium(chronic) = See 33.5(3) for details.</u> <u>*Temperature(DM) = See 33.6(4) for temperature standards.</u> <u>*Temperature(MWAT) = See 33.6(4) for temperature standards.</u>	D.O. (spawning)	---	7.0	Arsenic(T)	---	0.02
		pH	6.5 - 9.0	---	Beryllium	---	---
		Inorganic (mg/L)					
		acute	chronic	Cadmium	TVS(tr)	TVS	
		Ammonia	TVS	TVS	<u>Cadmium(T)</u>	<u>5.0</u>	<u>---</u>
		Boron	---	0.75	Chromium III	---	TVS
		Chloride	---	250	Chromium III(T)	50	---
		Chlorine	0.019	0.011	Chromium VI	TVS	TVS
		Cyanide	0.005	---	Copper	TVS	TVS
		Nitrate	10	---	Iron	---	WS
		Nitrite	<u>---0.05</u>	<u>0.05---</u>	Iron(T)	---	1000
		Phosphorus	---	0.11*	Lead	TVS	TVS
		Sulfate	---	WS	<u>Lead(T)</u>	<u>50</u>	<u>---</u>
		Sulfide	---	0.002	Manganese	TVS	TVS/WS
					Mercury(T)	---	0.01(†)
					Molybdenum(T)	---	<u>460150</u>
					Nickel	TVS	TVS
					<u>Nickel(T)</u>	<u>---</u>	<u>100</u>
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	<u>--varies*</u>	<u>--varies*</u>
					Zinc	TVS	TVS/TVS(sc)
4. All tributaries to the Colorado River, including all wetlands, from the outlet of Lake Granby to <u>above</u> the confluence with the Roaring Fork River, which are on National Forest lands, except for <u>those tributaries included in Segments 1 and 2, and the</u> specific listings in Segments <u>2, 8, 9 and 10a.</u>							
COUCUC04	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT				
Reviewable	Aq Life Cold 1 Recreation E Water Supply	Temperature °C	CS-I	CS-I	acute	chronic	
Qualifiers:		acute	chronic	Aluminum	---	---	
		D.O. (mg/L)	---	6.0	Arsenic	340	---
Other:	Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2021 <u>*Uranium(acute) = See 33.5(3) for details.</u> <u>*Uranium(chronic) = See 33.5(3) for details.</u>	D.O. (spawning)	---	7.0	Arsenic(T)	---	0.02
		pH	6.5 - 9.0	---	Beryllium	---	---
		Inorganic (mg/L)					
		acute	chronic	Cadmium	TVS(tr)	TVS	
		Ammonia	TVS	TVS	<u>Cadmium(T)</u>	<u>5.0</u>	<u>---</u>
		Boron	---	0.75	Chromium III	---	TVS
		Chloride	---	250	Chromium III(T)	50	---
		Chlorine	0.019	0.011	Chromium VI	TVS	TVS
		Cyanide	0.005	---	Copper	TVS	TVS
		Nitrate	10	---	Iron	---	WS
		Nitrite	<u>---0.05</u>	<u>0.05---</u>	Iron(T)	---	1000
		Phosphorus	---	0.11	Lead	TVS	TVS
		Sulfate	---	WS	<u>Lead(T)</u>	<u>50</u>	<u>---</u>
		Sulfide	---	0.002	Manganese	TVS	TVS/WS
					Mercury(T)	---	0.01(†)
					Molybdenum(T)	---	<u>460150</u>
					Nickel	TVS	TVS
					<u>Nickel(T)</u>	<u>---</u>	<u>100</u>
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	<u>--varies*</u>	<u>--varies*</u>
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #33 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Upper Colorado River Basin

5- Deleted.

COUCUC05	Classifications	Physical and Biological		Metals (ug/L)	
Designation		DM	MWAT	acute	chronic
Qualifiers:		acute	chronic		
Other:		Inorganic (mg/L)			
		acute	chronic		

5. Mainstem of Willow Creek from the outlet of Willow Creek Reservoir to the confluence with the Colorado River.

COUCUC05	Classifications	Physical and Biological		Metals (ug/L)	
Designation	Agriculture	DM	MWAT	acute	chronic
Reviewable	Aq Life Cold 1	CS-II	CS-II	340	---
	Recreation P	acute	chronic	---	0.02
	Water Supply	---	6.0	TVS(tr)	TVS
Qualifiers:		---	7.0	5.0	---
Other:		6.5 - 9.0	---	---	TVS
Temporary Modification(s):		---	150*	50	---
Arsenic(chronic) = hybrid		---	205	TVS	TVS
Expiration Date of 12/31/2021				TVS	TVS
*chlorophyll a (mg/m ³)(chronic) = applies only above the facilities listed at 33.5(4).		Inorganic (mg/L)		---	WS
*Phosphorus(chronic) = applies only above the facilities listed at 33.5(4).		acute	chronic	---	1000
*Uranium(acute) = See 33.5(3) for details.		TVS	TVS	TVS	TVS
*Uranium(chronic) = See 33.5(3) for details.		---	0.75	50	---
		---	250	TVS	TVS/WS
		0.019	0.011	---	0.01
		0.005	---	---	150
		10	---	TVS	TVS
		0.05	---	---	100
		---	0.11*	TVS	TVS
		---	WS	TVS	TVS(tr)
		---	0.002	varies*	varies*
				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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #33 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Upper Colorado River Basin

6a. All tributaries to the Colorado River, including all wetlands, from the sourceborder of Rocky Mountain National Park and Arapahoe National Recreation Area to a point immediately above the confluence with the Blue River and Muddy Creek, which are not on National Forest lands, except for the specific listings in Segments 1, 2, 4, 5, 6b, 6e, 8, 9 and 10a-c.

COUCUC06A	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 P		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/m ²)	---	150*	Cadmium(T)	5.0	---
Arsenic(chronic) = hybrid		E. Coli (per 100 mL)	---	205	Chromium III	---	TVS
Expiration Date of 12/31/2021					Chromium III(T)	50	---
*chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 33.5(4).		Inorganic (mg/L)			Chromium VI	TVS	TVS
*Phosphorus(chronic) = applies only above the facilities listed at 33.5(4).			acute	chronic	Copper	TVS	TVS
*Uranium(acute) = See 33.5(3) for details.		Ammonia	TVS	TVS	Iron	---	WS
*Uranium(chronic) = See 33.5(3) for details.		Boron	---	0.75	Iron(T)	---	1000
		Chloride	---	250	Lead	TVS	TVS
		Chlorine	0.019	0.011	Lead(T)	50	---
		Cyanide	0.005	---	Manganese	TVS	TVSWS
		Nitrate	10	---	Mercury(T)	---	0.01(†)
		Nitrite	---0.05	0.05---	Molybdenum(T)	---	160150
		Phosphorus	---	0.11*	Nickel	TVS	TVS
		Sulfate	---	WS	Nickel(T)	---	100
		Sulfide	---	0.002	Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	--varies*	--varies*
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #33 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Upper Colorado River Basin

6b. Mainstem of un-named tributary to Willow Creek from the headwaters (See 32, T3N, R76W) to the confluence with Willow Creek Reservoir Road (Section 8, T2N, R76W(40.131422, -105.920895)).

COUCUC06B	Classifications	Physical and Biological			Metals (ug/L)		
			DM	MWAT		acute	chronic
Designation	Agriculture						
	Aq Life Cold 2	Temperature °C	CS-II	CS-II	Aluminum	---	---
Reviewable	Recreation N		acute	chronic	Arsenic	340	---
		D.O. (mg/L)	---	6.0	Arsenic(T)	---	100
Qualifiers:		D.O. (spawning)	---	7.0	Beryllium	---	---
Other:		pH	6.5 - 9.0	---	Cadmium	-TVS(tr)	---TVS
*Phosphorus(chronic) = applies only above the facilities listed at 33.5(4).		chlorophyll a (mg/m ²)	---	---	Cadmium(T)	---	40
*Uranium(acute) = See 33.5(3) for details.		E. Coli (per 100 mL)	---	630	Chromium III	---TVS	---TVS
*Uranium(chronic) = See 33.5(3) for details.					Chromium III(T)	---	100
					Chromium VI	---TVS	---TVS
					Chromium VI(T)	---	400
			acute	chronic	Copper	---TVS	---TVS
		Ammonia	---TVS	---TVS	CopperIron(T)	200---	---1000
		Boron	---	0.75	Iron	---	---
		Chloride	---	---	Lead	---TVS	---TVS
		Chlorine	---0.019	---0.011	Lead(T)	---	400
		Cyanide	0.2005	---	Manganese	---TVS	---TVS
		Nitrate	100	---	ManganeseMercury(T)	---	2000.01
		Nitrite	---0.05	0.05---	Mercury	---	---
		Phosphorus	---	0.11*	Molybdenum(T)	---	460150
		Sulfate	---	---	Nickel(T)	200TVS	200TVS
		Sulfide	---	0.002	Selenium	---TVS	---TVS
					Selenium(T)	---	20
					Silver	---TVS	---TVS(tr)
					Uranium	---varies*	---varies*
					Zinc	---TVS	---TVS
					Zinc(T)	---	2000

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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #33 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Upper Colorado River Basin

8. Mainstem of the Williams Fork River, including all tributaries and wetlands, from the source to the confluence with the Colorado River, except for those tributaries listed in Segment 9.							
COUCUC08	Classifications	Physical and Biological			Metals (ug/L)		
Designation			DM	MWAT		acute	chronic
Reviewable	Agriculture						
	Aq Life Cold 1	Temperature °C	CS-I	CS-I	Aluminium	---	---
	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/m ²)	---	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	---
*Iron(chronic) = Point of compliance at Aspen Canyon Ranch well.		Inorganic (mg/L)			Chromium VI	TVS	TVS
*Manganese(chronic) = Point of compliance at Aspen Canyon Ranch well.			acute	chronic	Copper	TVS	TVS
Uranium(acute) = See 33.5(3) for details.		Ammonia	TVS	TVS	Iron	---	WS
*Uranium(chronic) = See 33.5(3) for details.		Boron	---	0.75	Iron(T)	---	1000
		Chloride	---	250	Lead	TVS	TVS
		Chlorine	0.019	0.011	Lead(T)	50	---
		Cyanide	0.005	---	Manganese	TVS	TVS/WS*
		Nitrate	10	---	Mercury(T)	---	0.01(t)
		Nitrite	---0.05	0.05---	Molybdenum(T)	---	190
		Phosphorus	---	0.11	Nickel	TVS	TVS
		Sulfate	---	WS	Nickel(T)	---	100
		Sulfide	---	0.002	Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	--varies*	--varies*
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #33 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Upper Colorado River Basin

9. All tributaries to the Colorado and Fraser Rivers, including all wetlands, within the Never Summer, Indian Peaks, Byers <u>Peak</u> , Vasquez <u>Peak</u> , Eagles Nest and Flat Tops Wilderness Areas.							
COUCUC09	Classifications	Physical and Biological			Metals (ug/L)		
Designation		DM	MWAT		acute	chronic	
OW	Agriculture						
	Aq Life Cold 1	Temperature °C	CS-I	CS-I	<u>Aluminium</u>	---	---
	Recreation E		acute	chronic	Arsenic	340	---
Water Supply	D.O. (mg/L)	---	6.0	Arsenic(T)	---	0.02	
	D.O. (spawning)	---	7.0	<u>Beryllium</u>	---	---	
Qualifiers:	pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS	
Other:	chlorophyll a (mg/m ²)	---	150	<u>Cadmium(T)</u>	<u>5.0</u>	---	
	E. Coli (per 100 mL)	---	126	Chromium III	---	TVS	
				Chromium III(T)	50	---	
				Inorganic (mg/L)	Chromium VI	TVS	TVS
					acute	chronic	
	Ammonia	TVS	TVS	Copper	TVS	TVS	
	Boron	---	0.75	Iron	---	WS	
	Chloride	---	250	Iron(T)	---	1000	
	Chlorine	0.019	0.011	Lead	TVS	TVS	
	Cyanide	0.005	---	<u>Lead(T)</u>	<u>50</u>	---	
	Nitrate	10	---	Manganese	TVS	TVSWS	
	Nitrite	<u>0.05</u>	<u>0.05</u>	Mercury(T)	---	0.01(†)	
	Phosphorus	---	0.11	Molybdenum(T)	---	<u>160</u> <u>150</u>	
	Sulfate	---	WS	Nickel	TVS	TVS	
	Sulfide	---	0.002	<u>Nickel(T)</u>	---	<u>100</u>	
				Selenium	TVS	TVS	
				Silver	TVS	TVS(tr)	
				Uranium	<u>--varies*</u>	<u>--varies*</u>	
				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 33.6 for further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #33 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Upper Colorado River Basin

10a. Mainstem of the Fraser River from the source to a point immediately below the Rendezvous Bridge-. (39.933728, -105.789785). All tributaries to the Fraser River, including wetlands, from the source to the confluence with the Colorado River, except for those tributaries included in Segment Segments 2 and 9.						
COUCUC10A	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT		acute	chronic
Reviewable	Aq Life Cold 1 Recreation E Water Supply	acute	chronic			
		Temperature °C	CS-I	CS-I	Aluminium	---
		D.O. (mg/L)	---	6.0	Arsenic	340
		D.O. (spawning)	---	7.0	Arsenic(T)	---
		pH	6.5 - 9.0	---	Beryllium	---
		chlorophyll a (mg/m ²)	---	150*	Cadmium	TVS(tr)
		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0
					Chromium III	---
					Chromium III(T)	50
					Chromium VI	TVS
					Copper	TVS
					Iron	---
					Iron(T)	---
					Lead	TVS
					Lead(T)	50
					Manganese	TVS
					Mercury(T)	---
					Molybdenum(T)	---
					Nickel	TVS
					Nickel(T)	---
					Selenium	TVS
					Silver	TVS
					Uranium	--varies*
					Zinc	TVS
						TVS/TVS(sc)

Qualifiers:

Other:

Temporary Modification(s):
Arsenic(chronic) = hybrid
Expiration Date of 12/31/2021

*chlorophyll a (mg/m²)(chronic) = applies only above the facilities listed at 33.5(4).
*Phosphorus(chronic) = applies only above the facilities listed at 33.5(4).
*Uranium(acute) = See 33.5(3) for details.
*Uranium(chronic) = See 33.5(3) for details.

Inorganic (mg/L)		
	acute	chronic
Ammonia	TVS	TVS
Boron	---	0.75
Chloride	---	250
Chlorine	0.019	0.011
Cyanide	0.005	---
Nitrate	10	---
Nitrite	--0.05-	0.05---
Phosphorus	---	0.11*
Sulfate	---	WS
Sulfide	---	0.002

	acute	chronic
Arsenic	340	---
Arsenic(T)	---	0.02
Beryllium	---	---
Cadmium	TVS(tr)	TVS
Cadmium(T)	5.0	---
Chromium III	---	TVS
Chromium III(T)	50	---
Chromium VI	TVS	TVS
Copper	TVS	TVS
Iron	---	WS
Iron(T)	---	1000
Lead	TVS	TVS
Lead(T)	50	---
Manganese	TVS	TVS/WS
Mercury(T)	---	0.01(†)
Molybdenum(T)	---	460150
Nickel	TVS	TVS
Nickel(T)	---	100
Selenium	TVS	TVS
Silver	TVS	TVS(tr)
Uranium	--varies*	--varies*
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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #33 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Upper Colorado River Basin

10c. Mainstem of the Fraser River from a point immediately below the Hammond <u>No 1 Ditch (39.952113, -105.814481)</u> to the confluence with the Colorado River.								
COUCUC10C	Classifications	Physical and Biological			Metals (ug/L)			
Designation	Agriculture Aq Life Cold 1 Recreation E Water Supply	DM	MWAT	acute		chronic		
Reviewable		acute	chronic	Aluminum	---	---		
		Temperature °C	CS-II	CS-II	Arsenic	340	---	
		D.O. (mg/L)	---	6.0	Arsenic(T)	---	0.02	
Qualifiers:		D.O. (spawning)	---	7.0	<u>Beryllium</u>	---	---	
Other:	Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2021 <u>*Uranium(acute) = See 33.5(3) for details.</u> <u>*Uranium(chronic) = See 33.5(3) for details.</u>	pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS	
		chlorophyll a (mg/m ²)	---	---	<u>Cadmium(T)</u>	<u>5.0</u>	---	
		E. Coli (per 100 mL)	---	126	Chromium III	---	TVS	
			Inorganic (mg/L)			Chromium III(T)	50	---
			acute	chronic	Chromium VI	TVS	TVS	
		Ammonia	TVS	TVS	Copper	TVS	TVS	
		Boron	---	0.75	Iron	---	WS	
		Chloride	---	250	Iron(T)	---	1000	
		Chlorine	0.019	0.011	Lead	TVS	TVS	
		Cyanide	0.005	---	<u>Lead(T)</u>	<u>50</u>	---	
		Nitrate	10	---	Manganese	TVS	TVS/WS	
		Nitrite	<u>---0.05</u>	<u>0.05---</u>	Mercury(T)	---	0.01(†)	
		Phosphorus	---	---	Molybdenum(T)	---	<u>160150</u>	
		Sulfate	---	WS	Nickel	TVS	TVS	
		Sulfide	---	0.002	<u>Nickel(T)</u>	---	<u>100</u>	
				Selenium	TVS	TVS		
				Silver	TVS	TVS(tr)		
				Uranium	<u>--varies*</u>	<u>--varies*</u>		
				Zinc	TVS	TVS/TVS(sc)		

11. All lakes and reservoirs <u>tributary to the Colorado River</u> within Rocky Mountain National Park <u>and within the</u> Never Summer, Indian Peaks, Byers <u>Peak</u> , Vasquez <u>Peak</u> , Eagles Nest and Flat Tops Wilderness Areas.								
COUCUC11	Classifications	Physical and Biological			Metals (ug/L)			
Designation	Agriculture OW Aq Life Cold 1 Recreation E Water Supply	DM	MWAT	acute		chronic		
OW		CL,CLLvaries*	GL,CLLvaries*	Aluminum	---	---		
		Temperature °C	---	---	Arsenic	340	---	
		D.O. (mg/L)	---	6.0	Arsenic(T)	---	0.02	
Qualifiers:		D.O. (spawning)	---	7.0	<u>Beryllium</u>	---	---	
Other:	*chlorophyll a (ug/L)(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area. *Phosphorus(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area. <u>*Uranium(acute) = See 33.5(3) for details.</u> <u>*Uranium(chronic) = See 33.5(3) for details.</u> <u>*Temperature = DM and MWAT=CL,CLL from 1/1-3/31 Rim Lake DM=22.4 and MWAT=16.6 from 4/1-12/31 All others DM and MWAT=CL,CLL from 4/1-12/31</u>	pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS	
		chlorophyll a (ug/L)	---	8*	<u>Cadmium(T)</u>	<u>5.0</u>	---	
		E. Coli (per 100 mL)	---	126	Chromium III	---	TVS	
			Inorganic (mg/L)			Chromium III(T)	50	---
			acute	chronic	Chromium VI	TVS	TVS	
		Ammonia	TVS	TVS	Copper	TVS	TVS	
		Boron	---	0.75	Iron	---	WS	
		Chloride	---	250	Iron(T)	---	1000	
		Chlorine	0.019	0.011	Lead	TVS	TVS	
		Cyanide	0.005	---	<u>Lead(T)</u>	<u>50</u>	---	
		Nitrate	10	---	Manganese	TVS	TVS/WS	
		Nitrite	<u>---0.05</u>	<u>0.05---</u>	Mercury(T)	---	0.01(†)	
		Phosphorus	---	0.025*	Molybdenum(T)	---	<u>160150</u>	
		Sulfate	---	WS	Nickel	TVS	TVS	
		Sulfide	---	0.002	<u>Nickel(T)</u>	---	<u>100</u>	
				Selenium	TVS	TVS		
				Silver	TVS	TVS(tr)		
				Uranium	<u>--varies*</u>	<u>--varies*</u>		
				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 33.6 for further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #33 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Upper Colorado River Basin

12. Lakes and reservoirs within Arapahoe National Recreation Area, including Grand Lake, Shadow Mountain Lake and Lake Granby.								
COUCUC12	Classifications	Physical and Biological			Metals (ug/L)			
Designation		DM	MWAT		acute	chronic		
Reviewable Aq Life Cold 1 <u>DUWS*</u> Recreation E Water Supply <u>DUWS*</u>	*Goal Qualifier Grand Lake: 7/1-9/11, Clarity = 3.8 meter average and 2.5 meter minimum Secchi disk depth. *chlorophyll a (ug/L)(chronic) = applies only above the facilities listed at 33.5(4), applies only to lakes and reservoirs larger than 25 acres surface area. *Classification: DUWS Applies only to Grand Lake *Phosphorus(chronic) = applies only above the facilities listed at 33.5(4), applies only to lakes and reservoirs larger than 25 acres surface area. <u>*Uranium(acute) = See 33.5(3) for details.</u> <u>*Uranium(chronic) = See 33.5(3) for details.</u> *clarity(chronic) = For Grand Lake, the highest level of clarity attainable, consistent with the exercise of established water rights, the protection of aquatic life, and protection of water quality throughout the Three Lakes system. <u>*Temperature = See section 33.6(4) for temperature standards. (4/1 - 12/31) = Shadow Mtn Res (MWAT=19.3)</u> <u>*Temperature(4/1 - 12/31) = Lake Granby (MWAT=19.6)</u>	Temperature °C	4/1-12/31 CL,CLLvaries*	19.3varies* ^B	Aluminum	---	---	
		Temperature °C	4/1-12/31 CL,CLL*	19.6*	^B	Arsenic	340	---
		Temperature °C	CL,CLL	CL,CLL		Arsenic(T)	---	0.02
				acute	chronic	Beryllium	---	---
		clarity		---	narrative*	Cadmium	TVS(tr)	TVS
		D.O. (mg/L)		---	6.0	Cadmium(T)	<u>5.0</u>	---
		D.O. (spawning)		---	7.0	Chromium III	---	TVS
		pH		6.5 - 9.0	---	Chromium III(T)	50	---
		chlorophyll a (ug/L)		---	8*	Chromium VI	TVS	TVS
		E. Coli (per 100 mL)		---	126	Copper	TVS	TVS
		Inorganic (mg/L)		Iron	---	WS		
		acute	chronic	Iron(T)	---	1000		
Ammonia		TVS	TVS	Lead	TVS	TVS		
Boron		---	0.75	Lead(T)	<u>50</u>	---		
Chloride		---	250	Manganese	TVS	TVS/WS		
Chlorine		0.019	0.011	Mercury(T)	---	0.01(t)		
Cyanide		0.005	---	Molybdenum(T)	---	<u>160150</u>		
Nitrate		10	---	Nickel	TVS	TVS		
Nitrite		<u>0.05</u>	<u>0.05</u>	Nickel(T)	---	<u>100</u>		
Phosphorus		---	0.025*	Selenium	TVS	TVS		
Sulfate		---	WS	Silver	TVS	TVS(tr)		
Sulfide		---	0.002	Uranium	<u>varies*</u>	<u>varies*</u>		
				Zinc	TVS	TVS		

13. All lakes and reservoirs tributary to the Colorado River from the boundary of Rocky Mountain National Park and Arapahoe National Recreation Area to a point immediately belowabove the confluence with the Roaring Fork River, except for specific listings in Upper Colorado Segments 11 and 12 and the Blue River and Eagle River subbasins.								
COUCUC13	Classifications	Physical and Biological			Metals (ug/L)			
Designation		DM	MWAT		acute	chronic		
Reviewable Aq Life Cold 1 <u>DUWS*</u> Recreation E Water Supply <u>DUWS*</u>	*chlorophyll a (ug/L)(chronic) = applies only above the facilities listed at 33.5(4), applies only to lakes and reservoirs larger than 25 acres surface area. *Classification: *DUWS Applies only to Ute Creek Res *Phosphorus(chronic) = applies only above the facilities listed at 33.5(4), applies only to lakes and reservoirs larger than 25 acres surface area. <u>*Temperature(4/1 - 12/31) = Wolford Mtn Res (MWAT=21.3)</u> <u>*Uranium(acute) = See 33.5(3) for details.</u> <u>*Uranium(chronic) = See 33.5(3) for details.</u> <u>*Temperature(4/1 - 12/31) = Williams Fork Res (MWAT=21.6) = See section 33.6(4) for temperature standards.</u>	Temperature °C	4/1-12/31 CLLvaries*	21.3varies* ^B	Aluminum	---	---	
		Temperature °C	4/1-12/31 CLL*	21.6*	^B	Arsenic	340	---
		Temperature °C	CL,CLL	CL,CLL		Arsenic(T)	---	0.02
				acute	chronic	Beryllium	---	---
		D.O. (mg/L)		---	6.0	Cadmium	TVS(tr)	TVS
		D.O. (spawning)		---	7.0	Cadmium(T)	<u>5.0</u>	---
		pH		6.5 - 9.0	---	Chromium III	---	TVS
		chlorophyll a (ug/L)		---	8*	Chromium III(T)	50	---
		E. Coli (per 100 mL)		---	126	Chromium VI	TVS	TVS
				Inorganic (mg/L)		Copper	TVS	TVS
		acute	chronic	Iron	---	WS		
Ammonia		TVS	TVS	Iron(T)	---	1000		
Boron		---	0.75	Lead	TVS	TVS		
Chloride		---	250	Lead(T)	<u>50</u>	---		
Chlorine		0.019	0.011	Manganese	TVS	TVS/WS		
Cyanide		0.005	---	Mercury(T)	---	0.01(t)		
Nitrate		10	---	Molybdenum(T)	---	<u>160150</u>		
Nitrite		<u>0.05</u>	<u>0.05</u>	Nickel	TVS	TVS		
Phosphorus		---	0.025*	Nickel(T)	---	<u>100</u>		
Sulfate		---	WS	Selenium	TVS	TVS		
Sulfide		---	0.002	Silver	TVS	TVS(tr)		
				Uranium	<u>varies*</u>	<u>varies*</u>		
				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 33.6 for further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

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

3. Deleted.							
COUCBL03	Classifications	Physical and Biological			Metals (ug/L)		
Designation		DM	MWAT	acute	chronic		
Qualifiers:		acute	chronic				
Other:		Inorganic (mg/L)					
		acute	chronic				
4a. All direct tributaries, <u>including wetlands</u> , to Dillon Reservoir and all tributaries <u>and, including wetlands in, to</u> the Blue River <u>drainage</u> above Dillon Reservoir, except for specific listings in Segments 1, 2a, 2b, <u>2c, 4b, 5, 6, and 6a</u> , 10-14 <u>and 16</u> .							
COUCBL04A	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute	chronic		
Reviewable	Aq Life Cold 1 Recreation E Water Supply	CS-I	CS-I	Aluminum	---	---	
Qualifiers:		acute	chronic	Arsenic	340	---	
Other:		Inorganic (mg/L)			Arsenic(T)	---	0.02
Temporary Modification(s):		acute	chronic	Beryllium	---	---SSE*	
Arsenic(chronic) = hybrid		Ammonia	TVS	TVS	Cadmium	TVS(tr)SSE*	TVS---
Expiration Date of 12/31/2021		Boron	---	0.75	Cadmium(T)	5.0	---
*Cadmium(acute) = $e^{(0.9789 \cdot \ln(\text{hardness}) - 3.866)} \cdot (1.136672 - (\ln(\text{hardness}) \cdot 0.041838))$		Chloride	---	250	Chromium III	---	TVS
*Cadmium(chronic) = $e^{(0.7977 \cdot \ln(\text{hardness}) - 3.909)} \cdot (1.101672 - (\ln(\text{hardness}) \cdot 0.041838))$		Chlorine	0.019	0.011	Chromium III(T)	50	---
*Uranium(acute) = See 33.5(3) for details.		Cyanide	0.005	---	Chromium VI	TVS	TVS
*Uranium(chronic) = See 33.5(3) for details.		Nitrate	10	---	Copper	TVS	TVS
		Nitrite	---0.05	0.05---	Iron	---	WS
		Phosphorus	---	0.11	Iron(T)	---	1000
		Sulfate	---	WS	Lead	TVS	TVS
		Sulfide	---	0.002	Lead(T)	50	---
					Manganese	TVS	TVS/WS
					Mercury(T)	---	0.01(t)
					Molybdenum(T)	---	460150
					Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	---varies*	---varies*
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

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

4b. North Fork of the Swan River, including all tributaries and wetlands, from the source to the confluence with the Swan River.							
COUCBL04B	Classifications	Physical and Biological			Metals (ug/L)		
Designation		DM	MWAT		acute	chronic	
OW	Agriculture						
	Aq Life Cold 1	Temperature °C	CS-I	CS-I	Aluminum	---	---
	Recreation E		acute	chronic	Arsenic	340	---
Qualifiers: Other: <u>*Uranium(acute) = See 33.5(3) for details.</u> <u>*Uranium(chronic) = See 33.5(3) for details.</u>	Water Supply	D.O. (mg/L)	---	6.0	Arsenic(T)	---	0.02
		D.O. (spawning)	---	7.0	Beryllium	---	---
		pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS
		chlorophyll a (mg/m ²)	---	150	Cadmium(T)	5.0	---
		E. Coli (per 100 mL)	---	126	Chromium III	---	TVS
					Chromium III(T)	50	---
					Chromium VI	TVS	TVS
					Copper	TVS	TVS
					Iron	---	WS
					Iron(T)	---	1000
					Lead	TVS	TVS
					Lead(T)	50	---
					Manganese	TVS	TVS/WS
					Mercury(T)	---	0.01(†)
					Molybdenum(T)	---	160150
				Nickel	TVS	TVS	
				Nickel(T)	---	100	
				Selenium	TVS	TVS	
				Silver	TVS	TVS(tr)	
				Uranium	--varies*	--varies*	
				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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

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

6a. Mainstem of the Snake River, including all tributaries and wetlands, from the source to Dillon Reservoir, except for specific listings in Segments 6b, 7, 8 and 9.							
COUCBL06A	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute		chronic	
UP	Aq Life Cold 1 Recreation E Water Supply	CS-I	CS-I	acute	chronic		
Qualifiers:		Temperature °C			Aluminum	---	---
					Arsenic	340	---
Other:		D.O. (mg/L)	---	6.0	Arsenic(T)	---	0.02
		D.O. (spawning)	---	7.0	Beryllium	--SSE*	---
Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2021		pH	6.5 - 9.0	---	Cadmium	TVS(tr)---	TVSSSE*
		chlorophyll a (mg/m ²)	---	150*	Cadmium(T)	5.0	---
*chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 33.5(4). *Phosphorus(chronic) = applies only above the facilities listed at 33.5(4). <u>*Cadmium(acute) = e^(0.9789*ln(hardness)-3.866)*(1.136672-(ln(hardness)*0.041838))</u> <u>*Cadmium(chronic) = e^(0.7977*ln(hardness)-3.909)*(1.101672-(ln(hardness)*0.041838))</u> <u>*Uranium(acute) = See 33.5(3) for details.</u> <u>*Uranium(chronic) = See 33.5(3) for details.</u>		E. Coli (per 100 mL)	---	126	Chromium III	---	TVS
		Inorganic (mg/L)			acute	chronic	Chromium III(T)
*Zinc(acute) = 0.978*e^0.8537(ln Hardness)+1.5227 *Zinc(chronic) = 0.986*e^0.8537(ln Hardness)+1.3519		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	--0.05	0.05---	Manganese	TVS	TVS/WS
		Phosphorus	---	0.11*	Mercury(T)	---	0.01(†)
		Sulfate	---	WS	Molybdenum(T)	---	460150
		Sulfide	---	0.002	Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	--varies*	--varies*
					Zinc	TVS	TVS

6b. Mainstem of Camp Creek, including all tributaries and wetlands, from the source to the confluence with the Snake River.							
COUCBL06B	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute		chronic	
Reviewable	Aq Life Cold 1 Recreation E Water Supply	CS-I	CS-I	acute	chronic		
Qualifiers:		Temperature °C			Aluminum	---	---
					Arsenic	340	---
Other:		D.O. (mg/L)	---	6.0	Arsenic(T)	---	0.02
		D.O. (spawning)	---	7.0	Beryllium	---	---
*Uranium(acute) = See 33.5(3) for details. *Uranium(chronic) = See 33.5(3) for details.		pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS
		chlorophyll a (mg/m ²)	---	150	Cadmium(T)	5.0	---
*Zinc(acute) = 0.978*e^0.8537(ln Hardness)+1.5227 *Zinc(chronic) = 0.986*e^0.8537(ln Hardness)+1.3519		E. Coli (per 100 mL)	---	126	Chromium III	---	TVS
		Inorganic (mg/L)			acute	chronic	Chromium III(T)
*Zinc(acute) = 0.978*e^0.8537(ln Hardness)+1.5227 *Zinc(chronic) = 0.986*e^0.8537(ln Hardness)+1.3519		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	--0.05	0.05---	Manganese	TVS	TVS/WS
		Phosphorus	---	0.11	Mercury(T)	---	0.01(†)
		Sulfate	---	WS	Molybdenum(T)	---	460150
		Sulfide	---	0.002	Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	--varies*	--varies*
					Zinc	---	SSE*
			Zinc	SSE*	---		

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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

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

7. Mainstem of Peru Creek, including all tributaries and wetlands, from the source to the confluence with the Snake River, except for specific listing in Segment 8.								
COUCBL07	Classifications	Physical and Biological			Metals (ug/L)			
Designation	Aq Life Cold 1	DM	MWAT		acute	chronic		
UP	Recreation <u>NE</u>	Temperature °C	CS-I	CS-I	Aluminum	---	---	
Qualifiers:		acute	chronic		Arsenic	340	---	
Other:		D.O. (mg/L)	---	6.0	Arsenic(T)	---	7.6	
		D.O. (spawning)	---	7.0	Beryllium	---	---SSE*	
		pH	6.5 - 9.0	---	Cadmium	TVS(†)SSE*	TVS---	
		chlorophyll a (mg/m ²)	---	---150	Chromium III	TVS	TVS	
		E. Coli (per 100 mL)	---	630126	Chromium VI	TVS	TVS	
					Copper	TVS	TVS	
		Inorganic (mg/L)			Iron(T)	---	1000	
		acute	chronic		Lead	TVS	TVS	
		Ammonia	TVS	TVS	Manganese	TVS	TVS	
		Boron	---	---	Mercury(T)	---	0.01(†)	
		Chloride	---	---	Molybdenum(T)	---	---	
		Chlorine	0.019	0.011	Nickel	TVS	TVS	
		Cyanide	0.005	---	Selenium	TVS	TVS	
		Nitrate	---	---	Silver	TVS	TVS(tr)	
		Nitrite	---0.05	0.05---	Uranium	---varies*	---varies*	
		Phosphorus	---	0.11	Zinc	TVS	TVS	
		Sulfate	---	---				
		Sulfide	---	0.002				
		*Cadmium(acute) = e^(0.9789*ln(hardness)-3.866)*(1.136672-(ln(hardness)*0.041838))						
		*Cadmium(chronic) = e^(0.7977*ln(hardness)-3.909)*(1.101672-(ln(hardness)*0.041838))						
		*Uranium(acute) = See 33.5(3) for details.						
		*Uranium(chronic) = See 33.5(3) for details.						

8. Mainstem of Keystone Gulch, including all tributaries and wetlands, from the source to the confluence with the Snake River. Mainstem of Chihuahua Creek, including all tributaries, and wetlands, from the source to the confluence with Peru Creek. Mainstem of the North Fork of the Snake River, including all tributaries and wetlands, from the source to the confluence with the Snake River. Mainstem of Jones Gulch, including all tributaries and wetlands, from the source to the confluence with the Snake River.								
COUCBL08	Classifications	Physical and Biological			Metals (ug/L)			
Designation	Agriculture	DM	MWAT		acute	chronic		
Reviewable	Aq Life Cold 1 Recreation E Water Supply	Temperature °C	CS-I	CS-I	Aluminum	---	---	
Qualifiers:		acute	chronic		Arsenic	340	---	
Other:		D.O. (mg/L)	---	6.0	Arsenic(T)	---	0.02	
		D.O. (spawning)	---	7.0	Beryllium	---	---	
		pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS	
		chlorophyll a (mg/m ²)	---	150*	Cadmium(T)	5.0	---	
		E. Coli (per 100 mL)	---	126	Chromium III	---	TVS	
					Chromium III(T)	50	---	
		Inorganic (mg/L)			Chromium VI	TVS	TVS	
		acute	chronic		Copper	TVS	TVS	
		Ammonia	TVS	TVS	Iron	---	WS	
		Boron	---	0.75	Iron(T)	---	1000	
		Chloride	---	250	Lead	TVS	TVS	
		Chlorine	0.019	0.011	Lead(T)	50	---	
		Cyanide	0.005	---	Manganese	TVS	TVS/WS	
		Nitrate	10	---	Mercury(T)	---	0.01(†)	
		Nitrite	---0.05	0.05---	Molybdenum(T)	---	160150	
		Phosphorus	---	0.11*	Nickel	TVS	TVS	
		Sulfate	---	WS	Nickel(T)	---	100	
		Sulfide	---	0.002	Selenium	TVS	TVS	
					Silver	TVS	TVS(tr)	
					Uranium	---varies*	---varies*	
					Zinc	TVS	TVS/TVS(sc)	
		Temporary Modification(s):						
		Arsenic(chronic) = hybrid						
		Expiration Date of 12/31/2021						
		*chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 33.5(4).						
		*Phosphorus(chronic) = applies only above the facilities listed at 33.5(4).						
		*Uranium(acute) = See 33.5(3) for details.						
		*Uranium(chronic) = See 33.5(3) for details.						

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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

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

9. Mainstem of Deer Creek, including all tributaries and wetlands, from the source to the confluence with the Snake River.						
COUCBL09	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	acute		
Reviewable	Aq Life Cold 1	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) TVS
		chlorophyll a (mg/m ²)	---	150	Cadmium(T)	5.0 ---
		E. Coli (per 100 mL)	---	126	Chromium III	---
					Chromium III(T)	50 ---
		Inorganic (mg/L)			Chromium VI	TVS TVS
		acute	chronic	Copper	TVS TVS	
		Ammonia	TVS	TVS	Iron	---
		Boron	---	0.75	Iron(T)	---
		Chloride	---	250	Lead	TVS TVS
		Chlorine	0.019	0.011	Lead(T)	50 ---
		Cyanide	0.005	---	Manganese	TVS TVS/WS
		Nitrate	10	---	Mercury(T)	---
		Nitrite	---0.05	0.05---	Molybdenum(T)	---
		Phosphorus	---	0.11	Nickel	TVS TVS
		Sulfate	---	WS	Nickel(T)	---
		Sulfide	---	0.002	Selenium	TVS TVS
					Silver	TVS TVS(tr)
					Uranium	--varies* --varies*
					Zinc	TVS TVS
10. Mainstem of French Gulch, including all tributaries and wetlands, from the source to a point 1.5 miles below Lincoln (-39.484661, -105.995074).						
COUCBL10	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	acute		
Reviewable	Aq Life Cold 1	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) TVS
		chlorophyll a (mg/m ²)	---	150	Cadmium(T)	5.0 ---
		E. Coli (per 100 mL)	---	126	Chromium III	---
					Chromium III(T)	50 ---
		Inorganic (mg/L)			Chromium VI	TVS TVS
		acute	chronic	Copper	TVS TVS	
		Ammonia	TVS	TVS	Iron	---
		Boron	---	0.75	Iron(T)	---
		Chloride	---	250	Lead	TVS TVS
		Chlorine	0.019	0.011	Lead(T)	50 ---
		Cyanide	0.005	---	Manganese	TVS TVS/WS
		Nitrate	10	---	Mercury(T)	---
		Nitrite	---0.05	0.05---	Molybdenum(T)	---
		Phosphorus	---	0.11	Nickel	TVS TVS
		Sulfate	---	WS	Nickel(T)	---
		Sulfide	---	0.002	Selenium	TVS TVS
					Silver	TVS TVS(tr)
					Uranium	--varies* --varies*
					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 33.6 for further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

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

11. Mainstem of French Gulch from a point 1.5 miles below Lincoln (39.484661, -105.995074) to the confluence with the Blue River.						
COUCBL11	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT		acute	chronic
UP	Aq Life Cold 1	Temperature °C	CS-I	CS-I	Aluminum	---
	Recreation P		acute	chronic	Arsenic	340
Qualifiers:		D.O. (mg/L)	---	6.0	Arsenic(T)	---
Other:		D.O. (spawning)	---	7.0	Beryllium	---
*Cadmium(acute) = existing quality		pH	6.5 - 9.0	---	Cadmium	EQTVS(tr) [±]
*Cadmium(chronic) = existing quality		chlorophyll a (mg/m ²)	---	150	Chromium III	TVS
*Lead(acute) = existing quality		E. Coli (per 100 mL)	---	205	Chromium III(T)	---
*Lead(chronic) = existing quality					Chromium VI	TVS
*Zinc(acute) = existing quality		Inorganic (mg/L)			Copper	TVS
*Zinc(chronic) = existing quality			acute	chronic	Iron(T)	---
*Uranium(acute) = See 33.5(3) for details.		Ammonia	TVS	TVS	Lead	EQTVS
*Uranium(chronic) = See 33.5(3) for details.		Boron	---	0.75	Manganese	TVS
		Chloride	---	---	Mercury(T)	---
		Chlorine	0.019	0.011	Molybdenum(T)	---
		Cyanide	0.005	---	Nickel	TVS
		Nitrate	100	---	Selenium	TVS
		Nitrite	---0.05	0.05---	Silver	TVS
		Phosphorus	---	0.11	Uranium	--varies*
		Sulfate	---	---	Zinc	EQTVS*
		Sulfide	---	0.002		

12. Mainstem of Illinois Gulch and Fredonia Gulch from their sourcesources to their confluenceconfluences with the Blue River.						
COUCBL12	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT		acute	chronic
Reviewable	Aq Life Cold 2	Temperature °C	CS-I	CS-I	Aluminum	---
	Recreation P		acute	chronic	Arsenic	340
Qualifiers:	Water Supply	D.O. (mg/L)	---	6.0	Arsenic(T)	---
		D.O. (spawning)	---	7.0	BerylliumCadmium	---
Other:		pH	6.5 - 9.0	---	Cadmium	TVS(tr)SSE*
Temporary Modification(s):		chlorophyll a (mg/m ²)	---	150	Cadmium(T)	5.0
Arsenic*(chronic) = hybrid Expiration Date of 12/31/2024		E. Coli (per 100 mL)	---	205	Chromium III	---
*Cadmium(acute) = e^(0.9789*ln(hardness)-3.866)*(1.136672-(ln(hardness)*0.041838))					Chromium III(T)	50
*Cadmium(chronic) = (0.7977*ln(hardness)-3.909)*(1.101672-(ln(hardness)*0.041838))		Inorganic (mg/L)			Chromium VI	TVS
*Uranium(acute) = See 33.5(3) for details.			acute	chronic	Copper	TVS
*Uranium(chronic) = See 33.5(3) for details.		Ammonia	TVS	TVS	Iron	---
		Boron	---	0.75	Iron(T)	---
		Chloride	---	250	Lead	TVS
		Chlorine	0.019	0.011	Lead(T)	50
		Cyanide	0.005	---	Manganese	TVS
		Nitrate	10	---	Mercury(T)	---
		Nitrite	---0.05	0.05---	Molybdenum(T)	---
		Phosphorus	---	0.11	Nickel	TVS
		Sulfate	---	WS	Nickel(T)	---
		Sulfide	---	0.002	Selenium	TVS
					Silver	TVS
					Uranium	--varies*
					Zinc	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 33.6 for further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

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

13. Mainstem of Tenmile Creek from the Climax Parshall Flume (39.447556, -106.157003) to a point immediately above the confluence of West Tenmile Creek and all tributaries and wetlands from the source of Tenmile Creek to a point immediately above the confluence with West Tenmile Creek, except for the specific listing in Segment 15.

COUCBL13	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute	chronic		
Reviewable	Aq Life Cold 1 Recreation P	CS-I	CS-I	Aluminum	---	---	
Qualifiers:		acute	chronic	Arsenic	340	---	
		D.O. (mg/L)	---	6.0	Arsenic(T)	---	7.6
		D.O. (spawning)	---	7.0	Beryllium	---	---
		pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS
		chlorophyll a (mg/m ²)	---	150*	Chromium III	TVS	TVS
		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(T)	---	0.01(±)
		Chlorine	0.019	0.011	Molybdenum(T)	---	---
		Cyanide	0.005	---	Nickel	TVS	TVS
		Nitrate	100	---	Selenium	TVS	TVS
		Nitrite	---0.05	0.05---	Silver	TVS	TVS(tr)
		Phosphorus	---	0.11*	Uranium	--varies*	--varies*
		Sulfate	---	---	Zinc	TVS	TVS/TVS(sc)
		Sulfide	---	0.002			

*Any water quality based effluent limit shall not cause or contribute to exceedances of water quality standards adopted to protect downstream uses.
 *chlorophyll a (mg/m²)(chronic) = applies only above the facilities listed at 33.5(4).
 *Phosphorus(chronic) = applies only above the facilities listed at 33.5(4).
*Uranium(acute) = See 33.5(3) for details.
*Uranium(chronic) = See 33.5(3) for details.

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 Recreation E Water Supply	CS-I	CS-I	Aluminum	---	---	
Qualifiers:		acute	chronic	Arsenic	340	---	
		D.O. (mg/L)	---	6.0	Arsenic(T)	---	0.02
		D.O. (spawning)	---	7.0	Beryllium	---	---
		pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS
		chlorophyll a (mg/m ²)	---	150*	Cadmium(T)	5.0	---
		E. Coli (per 100 mL)	---	126	Chromium III	---	TVS
					Chromium III(T)	50	---
		Inorganic (mg/L)			Chromium VI	TVS	TVS
		acute	chronic	Copper	TVS	TVS	
		Ammonia	TVS	TVS	Iron	---	WS
		Boron	---	0.75	Iron(T)	---	1000
		Chloride	---	250	Lead	TVS	TVS
		Chlorine	0.019	0.011	Lead(T)	50	---
		Cyanide	0.005	---	Manganese	TVS	TVS/WS
		Nitrate	10	---	Mercury(T)	---	0.01(±)
		Nitrite	---0.05	0.05---	Molybdenum(T)	---	210
		Phosphorus	---	0.11*	Nickel	TVS	TVS
		Sulfate	---	WS	Nickel(T)	---	100
		Sulfide	---	0.002	Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	--varies*	--varies*
					Zinc	TVS	TVS/TVS(sc)

Temporary Modification(s):
 Arsenic(chronic) = hybrid
 Expiration Date of 12/31/2021
 Molybdenum(chronic) = current conditions
 Expiration Date of 6/30/2020
 *chlorophyll a (mg/m²)(chronic) = applies only above the facilities listed at 33.5(4).
 *Phosphorus(chronic) = applies only above the facilities listed at 33.5(4).
*Uranium(acute) = See 33.5(3) for details.
*Uranium(chronic) = See 33.5(3) for details.

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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

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

15. Mainstem of Clinton Creek from the source to the confluence with Tenmile Creek.						
COUCBL15	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT			
Reviewable	Aq Life Cold 1 Recreation E Water Supply	acute	chronic	acute	chronic	
		Temperature °C	CS-I	CS-I	Aluminum	---
					Arsenic	340
		D.O. (mg/L)	---	6.0	Arsenic(T)	---
		D.O. (spawning)	---	7.0	Beryllium	---
		pH	6.5 - 9.0	---	Cadmium	TVS(tr)
		chlorophyll a (mg/m ²)	---	150	Cadmium(T)	5.0
		E. Coli (per 100 mL)	---	126	Chromium III	---
					Chromium III(T)	50
					Chromium VI	TVS
					Copper	TVS
					Iron	---
					Iron(T)	---
					Lead	TVS
					Lead(T)	50
					Manganese	TVS
					Mercury(T)	---
					Molybdenum(T)	---
					Nickel	TVS
					Nickel(T)	---
					Selenium	TVS
					Silver	TVS
					Uranium	--varies*
					Zinc	TVS

16. All tributaries to the Blue River, including all wetlands, within the Eagles Nest and Ptarmigan Peak Wilderness Areas.						
COUCBL16	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT			
OW	Aq Life Cold 1 Recreation E Water Supply	acute	chronic	acute	chronic	
		Temperature °C	CS-I	CS-I	Aluminum	---
					Arsenic	340
		D.O. (mg/L)	---	6.0	Arsenic(T)	---
		D.O. (spawning)	---	7.0	Beryllium	---
		pH	6.5 - 9.0	---	Cadmium	TVS(tr)
		chlorophyll a (mg/m ²)	---	150	Cadmium(T)	5.0
		E. Coli (per 100 mL)	---	126	Chromium III	---
					Chromium III(T)	50
					Chromium VI	TVS
					Copper	TVS
					Iron	---
					Iron(T)	---
					Lead	TVS
					Lead(T)	50
					Manganese	TVS
					Mercury(T)	---
					Molybdenum(T)	---
					Nickel	TVS
					Nickel(T)	---
					Selenium	TVS
					Silver	TVS
					Uranium	--varies*
					Zinc	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 33.6 for further details on applied standards for details on TVS, TVS(tr),
 TVS(sc), WS, temperature standards.

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

17. Mainstem of the Blue River from the outlet of Dillon Reservoir to the confluence with the Colorado River.						
COUCBL17	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT			
Reviewable	Aq Life Cold 1 Recreation E Water Supply	Temperature °C	CS-I CS-I	acute	chronic	
Qualifiers: Other: Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2021 *Uranium(acute) = See 33.5(3) for details. *Uranium(chronic) = See 33.5(3) for details.	D.O. (mg/L)	---	6.0	Aluminum	---	---
	D.O. (spawning)	---	7.0	Arsenic	340	---
	pH	6.5 - 9.0	---	Arsenic(T)	---	0.02
	chlorophyll a (mg/m ²)	---	---	Beryllium	---	---
	E. Coli (per 100 mL)	---	126	Cadmium	TVS(tr)	TVS
	Inorganic (mg/L)			Cadmium(T)	5.0	---
	Ammonia	TVS	TVS	Chromium III	---	TVS
	Boron	---	0.75	Chromium III(T)	50	---
	Chloride	---	250	Chromium VI	TVS	TVS
	Chlorine	0.019	0.011	Copper	TVS	TVS
	Cyanide	0.005	---	Iron	---	WS
	Nitrate	10	---	Iron(T)	---	1000
	Nitrite	---0.05	0.05---	Lead	TVS	TVS
	Phosphorus	---	---	Lead(T)	50	---
	Sulfate	---	WS	Manganese	TVS	TVS/WS
Sulfide	---	0.002	Mercury(T)	---	0.01(†)	
			Molybdenum(T)	---	160150	
			Nickel	TVS	TVS	
			Nickel(T)	---	100	
			Selenium	TVS	TVS	
			Silver	TVS	TVS(tr)	
			Uranium	--varies*	--varies*	
			Zinc	TVS	TVS/TVS(sc)	

18. All tributaries to the Blue River, including all wetlands, from the outlet of Dillon Reservoir to the outlet of Green Mountain Reservoir, except for the specific listing listings in Segment 16.						
COUCBL18	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT			
Reviewable	Aq Life Cold 1 Recreation E Water Supply	Temperature °C	CS-I CS-I	acute	chronic	
Qualifiers: Other: Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2021 *Uranium(acute) = See 33.5(3) for details. *Uranium(chronic) = See 33.5(3) for details.	D.O. (mg/L)	---	6.0	Aluminum	---	---
	D.O. (spawning)	---	7.0	Arsenic	340	---
	pH	6.5 - 9.0	---	Arsenic(T)	---	0.02
	chlorophyll a (mg/m ²)	---	150	Beryllium	---	---
	E. Coli (per 100 mL)	---	126	Cadmium	TVS(tr)	TVS
	Inorganic (mg/L)			Cadmium(T)	5.0	---
	Ammonia	TVS	TVS	Chromium III	---	TVS
	Boron	---	0.75	Chromium III(T)	50	---
	Chloride	---	250	Chromium VI	TVS	TVS
	Chlorine	0.019	0.011	Copper	TVS	TVS
	Cyanide	0.005	---	Iron	---	WS
	Nitrate	10	---	Iron(T)	---	1000
	Nitrite	---0.05	0.05---	Lead	TVS	TVS
	Phosphorus	---	0.11	Lead(T)	50	---
	Sulfate	---	WS	Manganese	TVS	TVS/WS
Sulfide	---	0.002	Mercury(T)	---	0.01(†)	
			Molybdenum(T)	---	160150	
			Nickel	TVS	TVS	
			Nickel(T)	---	100	
			Selenium	TVS	TVS	
			Silver	TVS	TVS(tr)	
			Uranium	--varies*	--varies*	
			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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

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

21. All lakes and reservoirs <u>tributary to the Blue River</u> within the Eagles Nest and Ptarmigan Peak Wilderness Areas.						
COUCBL21	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	acute chronic		
OW	Aq Life Cold 1 Recreation E Water Supply	CL,CLL	CL,CLL	Temperature °C	Aluminum	---
		acute	chronic	Arsenic	340	---
		D.O. (mg/L)	---	6.0	Arsenic(T)	---
		D.O. (spawning)	---	7.0	Beryllium	---
Qualifiers:		pH	6.5 - 9.0	---	Cadmium	TVS(tr) TVS
Other:		chlorophyll a (ug/L)	---	8*	Cadmium(T)	5.0 ---
*chlorophyll a (ug/L)(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area.		E. Coli (per 100 mL)	---	126	Chromium III	---
*Phosphorus(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area.		Inorganic (mg/L)			Chromium III(T)	50 ---
*Uranium(acute) = See 33.5(3) for details.					Chromium VI	TVS TVS
*Uranium(chronic) = See 33.5(3) for details.					Copper	TVS TVS
		Ammonia	TVS	TVS	Iron	---
		Boron	---	0.75	Iron(T)	---
		Chloride	---	250	Lead	TVS TVS
		Chlorine	0.019	0.011	Lead(T)	50 ---
		Cyanide	0.005	---	Manganese	TVS TVS/WS
		Nitrate	10	---	Mercury(T)	---
		Nitrite	---0.05	0.05---	Molybdenum(T)	---
		Phosphorus	---	0.025*	Nickel	TVS TVS
		Sulfate	---	WS	Nickel(T)	---
		Sulfide	---	0.002	Selenium	TVS TVS
					Silver	TVS TVS(tr)
					Uranium	--varies* --varies*
					Zinc	TVS TVS
22. Dillon Reservoir and all lakes and reservoirs <u>in tributary to the Blue River drainage</u> above Dillon Reservoir, except for specific listings in Segment 21.						
COUCBL22	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	acute chronic		
Reviewable	Aq Life Cold 1 DUWS* Recreation E Water Supply	CL,CLL	CL,CLL	Temperature °C	Aluminum	---
		acute	chronic	Arsenic	340	---
		D.O. (mg/L)	---	6.0	Arsenic(T)	---
		D.O. (spawning)	---	7.0	Beryllium	---
Qualifiers:		pH	6.5 - 9.0	---	Cadmium	TVS(tr) TVS
Other:		chlorophyll a (ug/L)	---	8*	Cadmium(T)	5.0 ---
Temporary Modification(s):		E. Coli (per 100 mL)	---	126	Chromium III	---
Arsenic(chronic) = hybrid		Inorganic (mg/L)			Chromium III(T)	50 ---
Expiration Date of 12/31/2021					Chromium VI	TVS TVS
*chlorophyll a (ug/L)(chronic) = applies only above the facilities listed at 33.5(4), applies only to lakes and reservoirs larger than 25 acres surface area.		Ammonia	TVS	TVS	Copper	TVS TVS
*Classification: DUWS Applies only to Goose Pasture Tarn		Boron	---	0.75	Iron	---
*Phosphorus(chronic) = 0.0074 mg/l for Dillon Reservoir in the top 15 meters of the water column for the months of July, August, September & October. Additional total phosphorus or Chla standards adopted for this segment do not apply to Dillon Reservoir.		Chloride	---	250	Iron(T)	---
*Phosphorus(chronic) = applies only above the facilities listed at 33.5(4), applies only to lakes and reservoirs larger than 25 acres surface area.		Chlorine	0.019	0.011	Lead	TVS TVS
*Uranium(acute) = See 33.5(3) for details.		Cyanide	0.005	---	Lead(T)	50 ---
*Uranium(chronic) = See 33.5(3) for details.		Nitrate	10	---	Manganese	TVS TVS/WS
		Nitrite	---0.05	0.05---	Mercury(T)	---
		Phosphorus	---	0.0074*	Molybdenum(T)	---
		Phosphorus	---	0.025*	Nickel	TVS TVS
		Sulfate	---	WS	Nickel(T)	---
		Sulfide	---	0.002	Selenium	TVS TVS
					Silver	TVS TVS(tr)
					Uranium	--varies* --varies*
					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 33.6 for further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

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

23. All lakes and reservoirs <u>in tributary to</u> the Blue River <u>drainage</u> below Dillon Reservoir, except for specific listings in Segment 21.							
COUCBL23	Classifications	Physical and Biological			Metals (ug/L)		
Designation		DM	MWAT		acute	chronic	
Reviewable	Agriculture						
	Aq Life Cold 1	Temperature °C	<u>GL,CLLvaries*</u>	<u>GL,CLLvaries*</u>	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
*chlorophyll a (ug/L)(chronic) = applies only above the facilities listed at 33.5(4), applies only to lakes and reservoirs larger than 25 acres surface area. *Phosphorus(chronic) = applies only above the facilities listed at 33.5(4), applies only to lakes and reservoirs larger than 25 acres surface area. *Uranium(acute) = See 33.5(3) for details. *Uranium(chronic) = See 33.5(3) for details. *Temperature = <u>DM and MWAT=CL/CLL from 1/1-3/31 Green Mountain Reservoir</u> <u>DM=22.4 and MWAT=16.6 from 4/1-12/31 All others</u> <u>DM and MWAT=CL/CLL from 4/1-12/31</u>		chlorophyll a (ug/L)	---	8*	Cadmium(T)	<u>5.0</u>	---
		E. Coli (per 100 mL)	---	126	Chromium III	---	TVS
		Inorganic (mg/L)			Chromium III(T)	50	---
			acute	chronic	Chromium VI	TVS	TVS
		Ammonia	TVS	TVS	Copper	TVS	TVS
		Boron	---	0.75	Iron	---	WS
		Chloride	---	250	Iron(T)	---	1000
		Chlorine	0.019	0.011	Lead	TVS	TVS
		Cyanide	0.005	---	Lead(T)	<u>50</u>	---
		Nitrate	10	---	Manganese	TVS	TVS/WS
Nitrite	<u>---0.05</u>	<u>0.05---</u>	Mercury(T)	---	0.01(t)		
Phosphorus	---	0.025*	Molybdenum(T)	---	<u>160150</u>		
Sulfate	---	WS	Nickel	TVS	TVS		
Sulfide	---	0.002	Nickel(T)	---	<u>100</u>		
			Selenium	TVS	TVS		
			Silver	TVS	TVS(tr)		
			Uranium	<u>---varies*</u>	<u>---varies*</u>		
			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 33.6 for further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

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

1. All tributaries <u>and wetlands</u> to the Eagle River <u>system, including all wetlands</u> , within the Gore Range - Eagles Nest and Holy Cross Wilderness <u>AreaAreas</u> .									
COUCEA01	Classifications	Physical and Biological			Metals (ug/L)				
Designation	Agriculture	DM	MWAT	acute		chronic			
OW*	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		
		D.O. (spawning)	---	7.0	Beryllium	---	---		
Qualifiers:		pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS		
Other:		chlorophyll a (mg/m ²)	---	150	Cadmium(T)	5.0	---		
Temporary Modification(s):		E. Coli (per 100 mL)	---	126	Chromium III	---	TVS		
Arsenic(chronic) = hybrid		Inorganic (mg/L)					Chromium III(T)	50	---
Expiration Date of 12/31/2021		acute					Chromium VI	TVS	TVS
*Designation: Consistent with the provisions of section 25-8-104 C.R.S. the OW designation shall not apply with respect to the Homestake Water Project of the Cities of Aurora and Colorado Springs.		chronic					Copper	TVS	TVS
*Uranium(acute) = See 33.5(3) for details.		Ammonia	TVS	TVS	Iron	---	WS		
*Uranium(chronic) = See 33.5(3) for details.		Boron	---	0.75	Iron(T)	---	1000		
		Chloride	---	250	Lead	TVS	TVS		
		Chlorine	0.019	0.011	Lead(T)	50	---		
		Cyanide	0.005	---	Manganese	TVS	TVS/WS		
		Nitrate	10	---	Mercury(T)	---	0.01(†)		
		Nitrite	---0.05	0.05---	Molybdenum(T)	---	460150		
		Phosphorus	---	0.11	Nickel	TVS	TVS		
		Sulfate	---	WS	Nickel(T)	---	100		
		Sulfide	---	0.002	Selenium	TVS	TVS		
					Silver	TVS	TVS(tr)		
					Uranium	--varies*	--varies*		
					Zinc	TVS	TVS/TVS(sc)		

2. Mainstem of the Eagle River from the source to <u>above</u> the compressor house bridge at Belden- (39.526879, -106.394950).									
COUCEA02	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		
		D.O. (spawning)	---	7.0	Beryllium	---	---		
Qualifiers:		pH	6.5 - 9.0	---	Cadmium	TVS(†)SSE*	TVSSSE*		
Other:		chlorophyll a (mg/m ²)	---	150*	Cadmium(T)	5.0	---		
Temporary Modification(s):		E. Coli (per 100 mL)	---	126	Chromium III	---	TVS		
Arsenic(chronic) = hybrid		Inorganic (mg/L)					Chromium III(T)	50	---
Expiration Date of 12/31/2021		acute					Chromium VI	TVS	TVS
*chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 33.5(4).		chronic					Copper	TVS	TVS
*Phosphorus(chronic) = applies only above the facilities listed at 33.5(4).		Ammonia	TVS	TVS	Iron	---	WS		
*Cadmium(acute) = $e^{(0.9789 \cdot \ln(\text{hardness}) - 3.866)} \cdot (1.136672 - (\ln(\text{hardness}) \cdot 0.041838))$		Boron	---	0.75	Iron(T)	---	1000		
*Cadmium(chronic) = $^{(0.7977 \cdot \ln(\text{hardness}) - 3.909)} \cdot (1.101672 - (\ln(\text{hardness}) \cdot 0.041838))$		Chloride	---	250	Lead	TVS	TVS		
*Uranium(acute) = See 33.5(3) for details.		Chlorine	0.019	0.011	Lead(T)	50	---		
*Uranium(chronic) = See 33.5(3) for details.		Cyanide	0.005	---	Manganese	TVS	TVS/WS		
		Nitrate	10	---	Mercury(T)	---	0.01(†)		
		Nitrite	---0.05	0.05---	Molybdenum(T)	---	460150		
		Phosphorus	---	0.11*	Nickel	TVS	TVS		
		Sulfate	---	WS	Nickel(T)	---	100		
		Sulfide	---	0.002	Selenium	TVS	TVS		
					Silver	TVS	TVS(tr)		
					Uranium	--varies*	--varies*		
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

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

3. All tributaries to the Eagle River, including wetlands, from the source to above the compressor house bridge at Belden, (39.526879, -106.394950), except for the specific listing in Segment 4 and those waters included for specific listings in Segments 1 and 4.

COUCEA03	Classifications	Physical and Biological			Metals (ug/L)		
Designation		DM	MWAT		acute	chronic	
Reviewable	Agriculture						
	Aq Life Cold 1	CS-I	CS-I	Aluminium	---	---	
	Recreation E	acute	chronic	Arsenic	340	---	
	Water Supply			Arsenic(T)	---	0.02	
Qualifiers:				D.O. (mg/L)	---	6.0	
Other:				D.O. (spawning)	---	7.0	
Temporary Modification(s):				pH	6.5 - 9.0	---	
Arsenic(chronic) = hybrid				chlorophyll a (mg/m ²)	---	150	
Expiration Date of 12/31/2021				E. Coli (per 100 mL)	---	126	
*Uranium(acute) = See 33.5(3) for details.		Inorganic (mg/L)			Chromium III	---	TVS
*Uranium(chronic) = See 33.5(3) for details.					Chromium III(T)	50	---
		acute	chronic	Chromium VI	TVS	TVS	
				Copper	TVS	TVS	
		Ammonia	TVS	TVS	Iron	---	WS
		Boron	---	0.75	Iron(T)	---	1000
		Chloride	---	250	Lead	TVS	TVS
		Chlorine	0.019	0.011	Lead(T)	50	---
		Cyanide	0.005	---	Manganese	TVS	TVS/WS
		Nitrate	10	---	Mercury(T)	---	0.01(t)
		Nitrite	---0.05	0.05---	Molybdenum(T)	---	460150
		Phosphorus	---	0.11	Nickel	TVS	TVS
		Sulfate	---	WS	Nickel(T)	---	100
		Sulfide	---	0.002	Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	--varies*	--varies*
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

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

4. Mainstem of Homestake Creek from the confluence of the East Fork to the confluence with the Eagle River.						
COUCEA04	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT		acute	chronic
Reviewable	Aq Life Cold 1	Temperature °C	CS-I	CS-I	Aluminium	---
	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/m ²)	---	150	Cadmium(T)	5.0
Arsenic(chronic) = hybrid		E. Coli (per 100 mL)	---	126	Chromium III	---
Expiration Date of 12/31/2024					Chromium III(T)	50
					Chromium VI	TVS
					Copper	TVS
					Iron	---
					Iron(T)	---
					Lead	TVS
					Lead(T)	50
					Manganese	TVS
					Manganese	TVS/WS
					Mercury(T)	---
					Mercury(T)	0.01(†)
					Molybdenum(T)	---
					Molybdenum(T)	160150
					Nickel	TVS
					Nickel	TVS
					Nickel(T)	---
					Nickel(T)	100
					Selenium	TVS
					Selenium	TVS
					Silver	TVS
					Silver	TVS(tr)
					Uranium	--varies*
					Uranium	--varies*
					Zinc	TVS
					Zinc	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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

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

5a. Mainstem of the Eagle River from above the compressor house bridge at Belden (39.526879, -106.394950) to a point immediately above the Highway 24 Bridge near Tigiwon Road: (39.554936, -106.401691).

COUCEA05A	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	SSE*TVS(tr)	SSE*
		chlorophyll a (mg/m ²)	---	---	Cadmium(T)	5.0	---
		E. Coli (per 100 mL)	---	126	Chromium III	---	TVS
					Chromium III(T)	50	---
					Chromium VI	TVS	TVS
					Copper	---	SSE*
					Copper	SSE*	---
					Iron	---	WS
					Iron(T)	---	1000
					Lead	TVS	TVS
					Lead(T)	50	---
					Manganese	TVS	TVS/WS
					Mercury(T)	---	0.01(t)
					Molybdenum(T)	---	460150
					Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	--varies*	---varies*
					Zinc	---	SSE*
					Zinc	SSE*	---
		Inorganic (mg/L)					
			acute	chronic			
		Ammonia	TVS	TVS			
		Boron	---	0.75			
		Chloride	---	250			
		Chlorine	0.019	0.011			
		Cyanide	0.005	---			
		Nitrate	10	---			
		Nitrite	---0.05	0.05---			
		Phosphorus	---	---			
		Sulfate	---	WS			
		Sulfide	---	0.002			

*Designation: 9/30/00 Baseline does not apply
 Cadmium(chronic) = (1.101672-[ln(hardness)(0.041838)])* e^(0.7998 [ln(hardness)]-3.1725)
 *Copper(acute) = 0.96*e^0.9801[ln(hardness)] - 1.1073
 *Copper(chronic) = 0.96*e^0.5897[ln(hardness)] - 0.0053
 *Cadmium(acute) = e^(0.9789*ln(hardness)-3.866)*(1.136672-[ln(hardness)*0.041838])
 *Uranium(acute) = See 33.5(3) for details.
 *Uranium(chronic) = See 33.5(3) for details.
 *Zinc(acute) = 0.978*e^0.8537[ln(hardness)]+2.1302
 *Zinc(chronic) = 0.986*e^0.8537[ln(hardness)]+1.9593

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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

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

5b. Mainstem of the Eagle River from a point immediately above the Highway 24 Bridge near Tigiwon Road (39.554936, -106.401691) to a point immediately above the confluence with Martin Creek.						
COUCEA05B	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	acute chronic		
Reviewable*	Aq Life Cold 1	CS-I	CS-I	Aluminum	---	---
	Recreation E	acute	chronic	Arsenic	340	---
	Water Supply	---	6.0	Arsenic(T)	---	0.02
Qualifiers:		---	7.0	Beryllium	---	---
Other:		6.5 - 9.0	---	Cadmium	TVS(tr)	SSE*
Temporary Modification(s):	chlorophyll a (mg/m ²)	---	---	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	---
	Inorganic (mg/L)			Chromium VI	TVS	TVS
	acute	chronic		Copper	---	SSE*
Designation: 9/30/00 Baseline does not apply	Ammonia	TVS	TVS	Copper	SSE	---
Cadmium(chronic) = (1.101672-[ln(hardness)(0.041838)])* e^(0.7998 [ln(hardness)]-3.1725)	Boron	---	0.75	Iron	---	WS
*Copper(acute) = 0.96*e^0.9801[ln(hardness)]-1.5865	Chloride	---	250	Iron(T)	---	1000
*Copper(chronic) = 0.96*e^0.5897[ln(hardness)]-0.4845	Chlorine	0.019	0.011	Lead	TVS	TVS
*Uranium(acute) = See 33.5(3) for details.	Cyanide	0.005	---	Lead(T)	50	---
*Uranium(chronic) = See 33.5(3) for details.	Nitrate	10	---	Manganese	TVS	TVS/WS
*Zinc(acute) = 0.978*e^0.8537[ln(hardness)]+2.1302 from 1/1 - 4/30	Nitrite	---0.05	0.05---	Mercury(T)	---	0.01(t)
0.978*e^0.8537[ln(hardness)]+1.4189 from 5/1 - 12/31	Phosphorus	---	---	Molybdenum(T)	---	460150
*Zinc(chronic) = 0.986*e^0.8537[ln(hardness)]+1.9593 from 1/1 - 4/30	Sulfate	---	WS	Nickel	TVS	TVS
0.986*e^0.8537[ln(hardness)]+1.2481 from 5/1 - 12/31	Sulfide	---	0.002	Nickel(T)	---	100
				Selenium	TVS	TVS
				Silver	TVS	TVS(tr)
				Uranium	--varies*	--varies*
				Zinc	---	SSE*
				Zinc	SSE*	---

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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

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

5c. Mainstem of the Eagle River from a point immediately above Martin Creek to a point immediately above the confluence with Gore Creek.						
COUCEA05C	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT			
Reviewable*	Aq Life Cold 1	CS-I	CS-I	acute	chronic	
	Recreation E	acute	chronic			
	Water Supply					
Qualifiers:	D.O. (mg/L)	---	6.0	Arsenic	---	---
	D.O. (spawning)	---	7.0	Arsenic(T)	---	0.02
Other:	pH	6.5 - 9.0	---	BerylliumCadmium	---	SSE*---
Temporary Modification(s):	chlorophyll a (mg/m ²)	---	---	Cadmium	TVS(†)SSE*	---SSE*
Arsenic(chronic) = hybrid	E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0	---
Expiration Date of 12/31/2021	Inorganic (mg/L)					
*Designation: 9/30/00 Baseline does not apply	Ammonia	TVS	TVS	Chromium III	---	TVS
*Cadmium(acute) = $e^{(0.9789 \cdot \ln(\text{hardness}) - 3.866)} \cdot (1.136672 - \ln(\text{hardness})) \cdot 0.041838$	Boron	---	0.75	Chromium III(T)	50	---
*Cadmium(chronic) = $(1.101672 - \ln(\text{hardness})) \cdot (0.041838) \cdot e^{(0.7998 \cdot \ln(\text{hardness}) - 3.1725)}$	Chloride	---	250	Chromium VI	TVS	TVS
Copper(acute) = $0.96 \cdot e^{(0.9801 \cdot \ln(\text{hardness}) - 1.5865)}$	Chlorine	0.019	0.011	Copper	---	SSE
Copper(chronic) = $0.96 \cdot e^{(0.5897 \cdot \ln(\text{hardness}) - 0.4845)}$	Cyanide	0.005	---	Copper	SSE	---
*Uranium(acute) = See 33.5(3) for details.	Nitrate	10	---	Iron	---	WS
*Uranium(chronic) = See 33.5(3) for details.	Nitrite	--0.05	0.05---	Iron(T)	---	1000
*Zinc(acute) = $0.978 \cdot e^{(0.8537 \cdot \ln(\text{hardness}) + 1.4189)}$	Phosphorus	---	---	Lead	TVS	TVS
*Zinc(chronic) = $0.986 \cdot e^{(0.8537 \cdot \ln(\text{hardness}) + 1.2481)}$	Sulfate	---	WS	Lead(T)	5.0	---
	Sulfide	---	0.002	Manganese	TVS	TVS/WS
				Mercury(T)	---	0.01(†)
				Molybdenum(T)	---	160150
				Nickel	TVS	TVS
				Nickel(T)	---	100
				Selenium	TVS	TVS
				Silver	TVS	TVS(tr)
				Uranium	--varies*	---varies*
				Zinc	---	SSE*
				Zinc	SSE*	---

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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

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

6. All tributaries to the Eagle River, including all wetlands, from above the compressor house bridge at Belden (39.526879, -106.394950) to a point immediately below the confluence with Lake Creek, except for the specific listings in Segments 1, 7a, 7b, and 8.

COUCEA06	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	<u>SSE*TVS(t†)</u>	<u>SSE*TVS</u>
Temporary Modification(s):		chlorophyll a (mg/m ²)	---	150	Cadmium(T)	<u>5.0</u>	---
Arsenic(chronic) = hybrid		E. Coli (per 100 mL)	---	126	Chromium III	---	TVS
Expiration Date of 12/31/2021					Chromium III(T)	50	---
					Inorganic (mg/L)		
			acute	chronic	Chromium VI	TVS	TVS
<u>*Uranium(acute) = See 33.5(3) for details.</u>		Ammonia	TVS	TVS	Copper	TVS	TVS
<u>*Uranium(chronic) = See 33.5(3) for details.</u>		Boron	---	0.75	Iron	---	WS
<u>*Cadmium(acute) = e^(0.9789*ln(hardness)-3.866)*(1.136672-(ln(hardness)*0.041838))</u>		Chloride	---	250	Iron(T)	---	1000
<u>*Cadmium(chronic)= e^(0.7977*ln(hardness)-3.909)*(1.101672-(ln(hardness)*0.041838))</u>		Chlorine	0.019	0.011	Lead	TVS	TVS
		Cyanide	0.005	---	Lead(T)	<u>50</u>	---
		Nitrate	10	---	Manganese	TVS	TVS/WS
		Nitrite	<u>---0.05</u>	<u>0.05---</u>	Mercury(T)	---	0.01(t†)
		Phosphorus	---	0.11	Molybdenum(T)	---	<u>160150</u>
		Sulfate	---	WS	Nickel	TVS	TVS
		Sulfide	---	0.002	Nickel(T)	---	<u>100</u>
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	<u>---varies*</u>	<u>---varies*</u>
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

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

7b. Mainstem of Cross Creek from ~~a point immediately~~ below the Minturn ~~Water Facility (39.565419, -106.417032)~~ to the confluence with the Eagle River, ~~except for these waters included in Segment 1.~~

COUCEA07B	Classifications	Physical and Biological		Metals (ug/L)		
		DM	MWAT	acute	chronic	
Designation	Agriculture					
	Aq Life Cold 1	Temperature °C	CS-I	CS-I	Aluminum	---
	Recreation E		acute	chronic	Arsenic	340
Reviewable*	Water Supply	D.O. (mg/L)	---	6.0	Arsenic(T)	---
		D.O. (spawning)	---	7.0	Beryllium	---
Qualifiers:	Other:	pH	6.5 - 9.0	---	Cadmium	TVS(tr)
		chlorophyll a (mg/m ²)	---	150	Cadmium(T)	5.0
*Designation: 9/30/00 Baseline does not apply	*Cadmium(chronic) = (1.101672-[ln(hardness)*(0.041838)])* e^(0.7998 [ln(hardness)]-3.1725)	E. Coli (per 100 mL)	---	126	Chromium III	---
					Chromium III(T)	50
*Copper(acute) = 0.96*e^0.9801[ln(hardness)]-1.5865	*Copper(chronic) = 0.96*e^0.5897[ln(hardness)]-0.4845	Inorganic (mg/L)			Chromium VI	TVS
			acute	chronic	Copper	---
*Uranium(acute) = See 33.5(3) for details.	*Uranium(chronic) = See 33.5(3) for details.	Ammonia	TVS	TVS	Copper	SSE*
		Boron	---	0.75	Iron	---
*Zinc(acute) = 0.978*e^0.8537[ln(hardness)]+2.1302 from 1/1 - 4/30	0.978*e^0.8537[ln(hardness)]+1.4189 from 5/1 - 12/31	Chloride	---	250	Iron(T)	---
		Chlorine	0.019	0.011	Lead	TVS
*Zinc(chronic) = 0.986*e^0.8537[ln(hardness)]+1.9593 from 1/1 - 4/30	0.986*e^0.8537[ln(hardness)]+1.2481 from 5/1 - 12/31	Cyanide	0.005	---	Lead(T)	50
		Nitrate	10	---	Manganese	TVS
		Nitrite	---0.05	0.05---	Mercury(T)	---
		Phosphorus	---	0.11	Molybdenum(T)	---
		Sulfate	---	WS	Nickel	TVS
		Sulfide	---	0.002	Nickel(T)	---
					Selenium	TVS
					Silver	TVS
					Uranium	--varies*
					Zinc	--SSE*
					Zinc	SSE*---

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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

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

10a. All tributaries to the Eagle River, including all wetlands, from a point immediately below the confluence with Lake Creek to the confluence with the Colorado River, except for specific listings in Segments 10b, 11 and 12, and those waters included in Segment 1.

COUCEA10A	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/m ²)	---	150	Cadmium(T)	5.0
Arsenic(chronic) = hybrid		E. Coli (per 100 mL)	---	126	Chromium III	---
Expiration Date of 12/31/2021					Chromium III(T)	50
					Chromium VI	TVS
					Copper	TVS
					Iron	---
					Iron(T)	---
					Lead	TVS
					Lead(T)	50
					Manganese	TVS
					Mercury(T)	---
					Mercury(T)	0.01(t)
					Molybdenum(T)	---
					Nickel	TVS
					Nickel(T)	---
					Selenium	TVS
					Silver	TVS
					Silver	TVS(tr)
					Uranium	--varies*
					Zinc	TVS
						TVS

*Uranium(acute) = See 33.5(3) for details.
*Uranium(chronic) = See 33.5(3) for details.

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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

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

11. Mainstem of Alkali Creek (<u>near Wolcott</u>) from the source to the confluence with the Eagle River. Mainstem of Milk Creek from the source to the confluence with the Eagle River.							
COUCEA11	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute		chronic	
Reviewable	Aq Life Cold 2 Recreation P	Temperature °C	CS-I	CS-I	Aluminum	---	
Qualifiers:	Fish Ingestion Standards Apply	acute	chronic	Arsenic	340	---	
Other:	*Uranium(acute) = See 33.5(3) for details. *Uranium(chronic) = See 33.5(3) for details.	D.O. (mg/L)	---	6.0	Arsenic(T)	---	
		D.O. (spawning)	---	7.0	Beryllium	---	
		pH	6.5 - 9.0	---	Beryllium(T)	---	
		chlorophyll a (mg/m ²)	---	150	Cadmium	-TVS(tr)	
		E. Coli (per 100 mL)	---	205	Cadmium(T)	40	
		Inorganic (mg/L)			Chromium III	-TVS	-TVS
		acute	chronic	Chromium III(T)	---	100	
		Ammonia	-TVS	-TVS	Chromium VI	-TVS	
		Boron	---	0.75	Chromium VI(T)	---	
		Chloride	---	250	Copper	-TVS	
		Chlorine	-0.019	-0.011	CopperIron(T)	---	
		Cyanide	0.2005	---	Iron	---	
		Nitrate	100	---	Lead	-TVS	
		Nitrite	-0.05	40	Lead(T)	---	
		Phosphorus	---	0.11	Manganese	-TVS	
		Sulfate	---	---	ManganeseMercury(T)	---	
		Sulfide	---	.002	Mercury	---	
					Molybdenum(T)	---	
					Nickel	-TVS	
					Nickel(T)	---	
					Selenium	TVS	
					Silver	-TVS	
					Uranium	-varies*	
					Zinc	-TVS	
					Zinc(T)	---	

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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

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

12. Mainstem of Brush Creek, from the source to the confluence with the Eagle River, including the East and West Forks- <u>except for those tributaries included in Segment 1.</u>							
COUCEA12	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
		D.O. (spawning)	---	7.0	Beryllium	---	---
Qualifiers:		pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS
		chlorophyll a (mg/m ²)	---	150	Cadmium(T)	5.0	---
Other:	Temporary Modification(s):	E. Coli (per 100 mL)	---	126	Chromium III	---	TVS
	Arsenic(chronic) = hybrid				Chromium III(T)	50	---
Expiration Date of 12/31/2021					Chromium VI	TVS	TVS
					Copper	TVS	TVS
					Iron	---	WS
					Iron(T)	---	1000
					Lead	TVS	TVS
					Lead(T)	50	---
					Manganese	TVS	TVSWS
					Nitrate	10	---
					Mercury(T)	---	0.01(†)
					Molybdenum(T)	---	160-150
					Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	--varies*	--varies*
					Zinc	TVS	TVS

*Uranium(acute) = See 33.5(3) for details.
 *Uranium(chronic) = See 33.5(3) for details.

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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

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

13. All lakes and reservoirs <u>tributary to the Eagle River</u> within the Gore Range - Eagles Nest and Holy Cross Wilderness Areas.						
COUCEA13	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	acute chronic		
OW	Aq Life Cold 1 Recreation E Water Supply	CL,CLL	CL,CLL	Temperature °C	Aluminum	---
		acute	chronic		Arsenic	340
Qualifiers:		---	6.0	D.O. (mg/L)	Arsenic(T)	---
Other:		---	7.0	D.O. (spawning)	Beryllium	---
<p>*chlorophyll a (ug/L)(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area.</p> <p>*Phosphorus(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area.</p> <p>*Uranium(acute) = See 33.5(3) for details.</p> <p>*Uranium(chronic) = See 33.5(3) for details.</p>		6.5 - 9.0	---	pH	Cadmium	TVS(tr)
		---	8*	chlorophyll a (ug/L)	Cadmium(T)	5.0
		---	126	E. Coli (per 100 mL)	Chromium III	---
		Inorganic (mg/L)			Chromium III(T)	50
		acute	chronic			
		TVS	TVS	Ammonia	Chromium VI	TVS
		---	0.75	Boron	Copper	TVS
		---	250	Chloride	Iron	---
		0.019	0.011	Chlorine	Iron(T)	---
		0.005	---	Cyanide	Lead	TVS
		10	---	Nitrate	Lead(T)	50
		---	0.05*	Nitrite	Manganese	TVS
		---	WS	Sulfate	Mercury(T)	---
		---	0.002	Sulfide	Mercury(T)	0.01(†)
		---	---		Molybdenum(T)	---
		---	---		Nickel	TVS
		---	---		Nickel(T)	---
		---	---		Selenium	TVS
		---	---		Silver	TVS
		---	---		Uranium	TVS(tr)
		---	---		Zinc	TVS
		---	---		Uranium	--varies*
		---	---		Zinc	TVS

14. All lakes and reservoirs tributary to the Eagle River except for specific listings in Segment 13.						
COUCEA14	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	acute chronic		
Reviewable	Aq Life Cold 1 Recreation E Water Supply	CL,CLL	CL,CLL	Temperature °C	Aluminum	---
		acute	chronic		Arsenic	340
Qualifiers:		---	6.0	D.O. (mg/L)	Arsenic(T)	---
Other:		---	7.0	D.O. (spawning)	Beryllium	---
<p>*chlorophyll a (ug/L)(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area.</p> <p>*Phosphorus(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area.</p> <p>*Uranium(acute) = See 33.5(3) for details.</p> <p>*Uranium(chronic) = See 33.5(3) for details.</p>		6.5 - 9.0	---	pH	Cadmium	TVS(tr)
		---	8*	chlorophyll a (ug/L)	Cadmium(T)	5.0
		---	126	E. Coli (per 100 mL)	Chromium III	---
		Inorganic (mg/L)			Chromium III(T)	50
		acute	chronic			
		TVS	TVS	Ammonia	Chromium VI	TVS
		---	0.75	Boron	Copper	TVS
		---	250	Chloride	Iron	---
		0.019	0.011	Chlorine	Iron(T)	---
		0.005	---	Cyanide	Lead	TVS
		10	---	Nitrate	Lead(T)	50
		---	0.05*	Nitrite	Manganese	TVS
		---	WS	Sulfate	Mercury(T)	---
		---	0.002	Sulfide	Mercury(T)	0.01(†)
		---	---		Molybdenum(T)	---
		---	---		Nickel	TVS
		---	---		Nickel(T)	---
		---	---		Selenium	TVS
		---	---		Silver	TVS
		---	---		Uranium	TVS(tr)
		---	---		Zinc	TVS
		---	---		Uranium	--varies*
		---	---		Zinc	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 33.6 for further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #33 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Roaring Fork River Basin

1. All tributaries to the Roaring Fork River ~~system~~, including all wetlands, within the Maroon Bells/Snowmass, Holy Cross, Raggeds, Collegiate Peaks and Hunter/Fryingpan Wilderness Areas.

COUCRF01	Classifications	Physical and Biological			Metals (ug/L)		
Designation			DM	MWAT		acute	chronic
OW	Agriculture						
	Aq Life Cold 1	Temperature °C	CS-I	CS-I	Aluminium	---	---
	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): Arsenic(chronic) = hybrid Expiration Date of 12/31/2024 *Uranium(acute) = See 33.5(3) for details. *Uranium(chronic) = See 33.5(3) for details.		chlorophyll a (mg/m ²)	---	150	Cadmium(T)	<u>5.0</u>	---
		E. Coli (per 100 mL)	---	126	Chromium III	---	TVS
		Inorganic (mg/L)			Chromium III(T)	50	---
			acute	chronic	Chromium VI	TVS	TVS
		Ammonia	TVS	TVS	Copper	TVS	TVS
		Boron	---	0.75	Iron	---	WS
		Chloride	---	250	Iron(T)	---	1000
		Chlorine	0.019	0.011	Lead	TVS	TVS
		Cyanide	0.005	---	Lead(T)	<u>50</u>	---
		Nitrate	10	---	Manganese	TVS	TVS/WS
		Nitrite	0.05	0.05	Mercury(T)	---	0.01(†)
		Phosphorus	---	0.11	Molybdenum(T)	---	160 <u>150</u>
		Sulfate	---	WS	Nickel	TVS	TVS
		Sulfide	---	0.002	Nickel(T)	---	<u>100</u>
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	varies*	varies*
					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 33.6 for further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #33 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Roaring Fork River Basin

2. Mainstem of the Roaring Fork River, including all tributaries and wetlands, from the source to a point immediately below the confluence with Hunter Creek, except for those tributaries included in Segment 1.

COUCRF02	Classifications	Physical and Biological			Metals (ug/L)		
		DM	MWAT		acute	chronic	
Designation	Agriculture						
	Aq Life Cold 1	Temperature °C	CS-I	CS-I	Aluminum	---	---
	Recreation E		acute	chronic	Arsenic	340	---
Reviewable	Water Supply	D.O. (mg/L)	---	6.0	Arsenic(T)	---	0.02
		D.O. (spawning)	---	7.0	Beryllium	---	---
		pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS
Qualifiers:	Other:	chlorophyll a (mg/m ²)	---	150	Cadmium(T)	5.0	---
		E. Coli (per 100 mL)	---	126	Chromium III	---	TVS
Temporary Modification(s):	Arsenic(chronic) = hybrid				Chromium III(T)	50	---
					Chromium VI	TVS	TVS
Expiration Date of 12/31/2021	*Uranium(acute) = See 33.5(3) for details. *Uranium(chronic) = See 33.5(3) for details.	Inorganic (mg/L)			Copper	TVS	TVS
			acute	chronic	Iron	---	WS
		Ammonia	TVS	TVS	Iron(T)	---	1000
		Boron	---	0.75	Lead	TVS	TVS
		Chloride	---	250	Lead(T)	50	---
		Chlorine	0.019	0.011	Manganese	TVS	TVS/WS
		Cyanide	0.005	---	Mercury(T)	---	0.01(†)
		Nitrate	10	---	Molybdenum(T)	---	160150
		Nitrite	0.05	0.05	Nickel	TVS	TVS
		Phosphorus	---	0.11	Nickel(T)	---	100
		Sulfate	---	WS	Selenium	TVS	TVS
		Sulfide	---	0.002	Silver	TVS	TVS(tr)
					Uranium	--varies*	--varies*
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #33 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Roaring Fork River Basin

3a. Mainstem of the Roaring Fork River, from a point immediately below the confluence with Hunter Creek, to a point immediately below the confluence with the Fryingpan River. All tributaries to the Roaring Fork River, including wetlands, from a point immediately below the confluence with Hunter Creek to the confluence with the Colorado River, except for those tributaries included in Segment 1 ~~and specific listings in Segments 3b-10, 3b, 3d, 4-10b.~~

COUCRF03A	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/m ²)	---	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	---
					Chromium VI	TVS	TVS
					Copper	TVS	TVS
					Iron	---	WS
					Iron(T)	---	1000
					Lead	TVS	TVS
					Lead(T)	50	---
					Manganese	TVS	TVS/WS
					Mercury(T)	---	0.01(†)
					Molybdenum(T)	---	160-150
					Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	--varies*	--varies*
					Zinc	TVS	TVS

*chlorophyll a (mg/m²)(chronic) = applies only above the facilities listed at 33.5(4).
 *Phosphorus(chronic) = applies only above the facilities listed at 33.5(4).
*Uranium(acute) = See 33.5(3) for details.
*Uranium(chronic) = See 33.5(3) for details.

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 further details on applied standardsfor details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #33 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Roaring Fork River Basin

3c. Mainstem of the Roaring Fork River, from a point immediately below the confluence with the Frypanpan River, to the confluence with the Colorado River. ~~Mainstem of Three Mile Creek, including all tributaries and wetlands, from the source to the confluence with the Roaring Fork River.~~

COUCRF03C	Classifications	Physical and Biological			Metals (ug/L)		
		DM	MWAT		acute	chronic	
Designation	Agriculture						
	Reviewable						
	Aq Life Cold 1	Temperature °C	<u>varies*CS-II</u>	<u>Varies*CS-II</u>	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/m ²)	---	150*	<u>Cadmium(T)</u>	<u>5.0</u>	---
Arsenic(chronic) = hybrid		E. Coli (per 100 mL)	---	126	Chromium III	---	TVS
Expiration Date of 12/31/2021					Chromium III(T)	50	---
					Chromium VI	TVS	TVS
					Copper	TVS	TVS
					Iron	---	WS
					Iron(T)	---	1000
					Lead	TVS	TVS
					<u>Lead(T)</u>	<u>50</u>	---
					Manganese	TVS	TVS/WS
					Mercury(T)	---	0.01(t)
					Molybdenum(T)	---	<u>460/150</u>
					Nickel	TVS	TVS
					<u>Nickel(T)</u>	---	<u>100</u>
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	<u>--varies*</u>	<u>--varies*</u>
					Zinc	TVS	TVS

*chlorophyll a (mg/m²)(chronic) = applies only above the facilities listed at 33.5(4).
 *Phosphorus(chronic) = applies only above the facilities listed at 33.5(4).
*Uranium(acute) = See 33.5(3) for details.
*Uranium(chronic) = See 33.5(3) for details.
*Temperature(DM) = See 33.6(4) for temperature standards.
*Temperature(MWAT) = See 33.6(4) for temperature standards.

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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #33 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Roaring Fork River Basin

3d. Mainstem of Cattle Creek, including all tributaries and wetlands, from the source to the most downstream White River National Forest boundary.						
COUCRF03D	Classifications	Physical and Biological			Metals (ug/L)	
Designation		DM	MWAT		acute	chronic
OW	Agriculture					
	Aq Life Cold 1	CS-I	CS-I	Aluminum	---	---
	Recreation E	acute	chronic	Arsenic	340	---
	Water Supply			Arsenic(T)	---	0.02
Qualifiers:		D.O. (mg/L)	---	6.0	Arsenic(T)	0.02
Other:		D.O. (spawning)	---	7.0	Beryllium	---
*Uranium(acute) = See 33.5(3) for details. *Uranium(chronic) = See 33.5(3) for details.		pH	6.5 - 9.0	---	Cadmium	TVS(tr)
		chlorophyll a (mg/m ²)	---	150	Cadmium(T)	5.0
		E. Coli (per 100 mL)	---	126	Chromium III	---
		Inorganic (mg/L)			Chromium III(T)	50
			acute	chronic	Chromium VI	TVS
		Ammonia	TVS	TVS	Copper	TVS
		Boron	---	0.75	Iron	---
		Chloride	---	250	Iron(T)	---
		Chlorine	0.019	0.011	Lead	TVS
		Cyanide	0.005	---	Lead(T)	50
		Nitrate	10	---	Manganese	TVS
		Nitrite	---0.05	0.05---	Mercury(T)	---
		Phosphorus	---	0.11	Molybdenum(T)	---
		Sulfate	---	WS	Nickel	TVS
		Sulfide	---	0.002	Nickel(T)	---
					Selenium	TVS
					Silver	TVS
					Uranium	--varies*
					Zinc	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 33.6 for further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #33 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Roaring Fork River Basin

4. Mainstem of Brush Creek from the source to the confluence with the Roaring Fork River.							
COUCRF04	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	---
Qualifiers: Other: Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2021 *chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 33.5(4). *Phosphorus(chronic) = applies only above the facilities listed at 33.5(4). <u>*Uranium(acute) = See 33.5(3) for details.</u> <u>*Uranium(chronic) = See 33.5(3) for details.</u>	Water Supply	D.O. (mg/L)	---	6.0	Arsenic(T)	---	0.02
	D.O. (spawning)	---	7.0	Beryllium	---	---	
	pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS	
	chlorophyll a (mg/m ²)	---	150*	Cadmium(T)	5.0	---	
	E. Coli (per 100 mL)	---	126	Chromium III	---	TVS	
	Inorganic (mg/L)			Chromium III(T)	50	---	
				Chromium VI	TVS	TVS	
				Copper	TVS	TVS	
	Ammonia	TVS	TVS	Iron	---	WS	
	Boron	---	0.75	Iron(T)	---	1000	
	Chloride	---	250	Lead	TVS	TVS	
	Chlorine	0.019	0.011	Lead(T)	50	---	
	Cyanide	0.005	---	Manganese	TVS	TVS/WS	
	Nitrate	10	---	Mercury(T)	---	0.01(†)	
	Nitrite	---0.05	0.05---	Molybdenum(T)	---	160150	
Phosphorus	---	0.11*	Nickel	TVS	TVS		
Sulfate	---	WS	Nickel(T)	---	100		
Sulfide	---	0.002	Selenium	TVS	TVS		
			Silver	TVS	TVS(tr)		
			Uranium	--varies*	--varies*		
			Zinc	TVS	TVS		

5. Mainstem of the Fryingpan River from the source to the confluence with the North Fork Fryingpan River, except for the portion included in Segment 1.							
COUCRF05	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	---
Qualifiers: Other: <u>*Uranium(acute) = See 33.5(3) for details.</u> <u>*Uranium(chronic) = See 33.5(3) for details.</u>	Water Supply	D.O. (mg/L)	---	6.0	Arsenic(T)	---	0.02
	D.O. (spawning)	---	7.0	Beryllium	---	---	
	pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS	
	chlorophyll a (mg/m ²)	---	150	Cadmium(T)	5.0	---	
	E. Coli (per 100 mL)	---	126	Chromium III	---	TVS	
	Inorganic (mg/L)			Chromium III(T)	50	---	
				Chromium VI	TVS	TVS	
				Copper	TVS	TVS	
	Ammonia	TVS	TVS	Iron	---	WS	
	Boron	---	0.75	Iron(T)	---	1000	
	Chloride	---	250	Lead	TVS	TVS	
	Chlorine	0.019	0.011	Lead(T)	50	---	
	Cyanide	0.005	---	Manganese	TVS	TVS/WS	
	Nitrate	10	---	Mercury(T)	---	0.01(†)	
	Nitrite	---0.05	0.05---	Molybdenum(T)	---	160150	
Phosphorus	---	0.11	Nickel	TVS	TVS		
Sulfate	---	WS	Nickel(T)	---	100		
Sulfide	---	0.002	Selenium	TVS	TVS		
			Silver	TVS	TVS(tr)		
			Uranium	--varies*	--varies*		
			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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #33 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Roaring Fork River Basin

6. Mainstem of the Fryingpan River from the confluence with the North Fork <u>Fryingpan River</u> to the confluence with the Roaring Fork River.						
COUCRF06	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT			
Reviewable	Aq Life Cold 1 Recreation E Water Supply	CS-I	CS-I	acute	chronic	
Qualifiers:		acute	chronic			
Other:						
Temperature °C				Aluminum	---	---
D.O. (mg/L)		---	6.0	Arsenic	340	---
D.O. (spawning)		---	7.0	Arsenic(T)	---	0.02
pH		6.5 - 9.0	---	Beryllium	---	---
chlorophyll a (mg/m ²)		---	150	Cadmium	TVS(tr)	TVS
E. Coli (per 100 mL)		---	126	Cadmium(T)	5.0	---
				Chromium III	---	TVS
				Chromium III(T)	50	---
				Chromium VI	TVS	TVS
				Copper	TVS	TVS
				Iron	---	WS
				Iron(T)	---	1000
				Lead	TVS	TVS
				Lead(T)	50	---
				Manganese	TVS	TVS/WS
				Mercury(T)	---	0.01(†)
				Molybdenum(T)	---	160150
				Nickel	TVS	TVS
				Nickel(T)	---	100
				Selenium	TVS	TVS
				Silver	TVS	TVS(tr)
				Uranium	--varies*	--varies*
				Zinc	TVS	TVS/TVS(sc)
		Inorganic (mg/L)				
		acute	chronic			
Ammonia		TVS	TVS			
Boron		---	0.75			
Chloride		---	250			
Chlorine		0.019	0.011			
Cyanide		0.005	---			
Nitrate		10	---			
Nitrite		--0.05-	0.05---			
Phosphorus		---	0.11			
Sulfate		---	WS			
Sulfide		---	0.002			

7. All tributaries to the Fryingpan River, including all wetlands, <u>from the source to the confluence with the Roaring Fork River</u> , except for those tributaries included in Segment 1.						
COUCRF07	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT			
Reviewable	Aq Life Cold 1 Recreation E Water Supply	CS-I	CS-I	acute	chronic	
Qualifiers:		acute	chronic			
Other:						
Temperature °C				Aluminum	---	---
D.O. (mg/L)		---	6.0	Arsenic	340	---
D.O. (spawning)		---	7.0	Arsenic(T)	---	0.02
pH		6.5 - 9.0	---	Beryllium	---	---
chlorophyll a (mg/m ²)		---	150	Cadmium	TVS(tr)	TVS
E. Coli (per 100 mL)		---	126	Cadmium(T)	5.0	---
				Chromium III	---	TVS
				Chromium III(T)	50	---
				Chromium VI	TVS	TVS
				Copper	TVS	TVS
				Iron	---	WS
				Iron(T)	---	1000
				Lead	TVS	TVS
				Lead(T)	50	---
				Manganese	TVS	TVS/WS
				Mercury(T)	---	0.01(†)
				Molybdenum(T)	---	160150
				Nickel	TVS	TVS
				Nickel(T)	---	100
				Selenium	TVS	TVS
				Silver	TVS	TVS(tr)
				Uranium	--varies*	--varies*
				Zinc	TVS	TVS/TVS(sc)
		Inorganic (mg/L)				
		acute	chronic			
Ammonia		TVS	TVS			
Boron		---	0.75			
Chloride		---	250			
Chlorine		0.019	0.011			
Cyanide		0.005	---			
Nitrate		10	---			
Nitrite		--0.05-	0.05---			
Phosphorus		---	0.11			
Sulfate		---	WS			
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 33.6 for further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #33 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Roaring Fork River Basin

8. Mainstem of the Crystal River, including all tributaries and wetlands, from the source to the confluence with the Roaring Fork River, except for the specific listings in Segments 1, 9, 10a and 10b.

COUCRF08	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/m ²)	---	150*	Cadmium(T)	<u>5.0</u>	---
Arsenic(chronic) = hybrid		E. Coli (per 100 mL)	---	126	Chromium III	---	TVS
Expiration Date of 12/31/2021					Chromium III(T)	50	---
*chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 33.5(4).		Inorganic (mg/L)			Chromium VI	TVS	TVS
*Phosphorus(chronic) = applies only above the facilities listed at 33.5(4).			acute	chronic	Copper	TVS	TVS
*Uranium(acute) = See 33.5(3) for details.		Ammonia	TVS	TVS	Iron	---	WS
*Uranium(chronic) = See 33.5(3) for details.		Boron	---	0.75	Iron(T)	---	1000
		Chloride	---	250	Lead	TVS	TVS
		Chlorine	0.019	0.011	Lead(T)	<u>50</u>	---
		Cyanide	0.005	---	Manganese	TVS	TVS/WS
		Nitrate	10	---	Mercury(T)	---	0.01(t)
		Nitrite	<u>0.05</u>	<u>0.05</u>	Molybdenum(T)	---	<u>160</u> <u>150</u>
		Phosphorus	---	0.11*	Nickel	TVS	TVS
		Sulfate	---	WS	Nickel(T)	---	<u>100</u>
		Sulfide	---	0.002	Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	<u>--varies*</u>	<u>--varies*</u>
					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 33.6 for further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #33 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Roaring Fork River Basin

9. Mainstem of Coal Creek, including all tributaries and wetlands, from the source to the confluence with the Crystal River.						
COUCRF09	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT		acute	chronic
Reviewable	Aq Life Cold 1	CS-I	CS-I	Aluminum	---	---
	Recreation E	acute	chronic	Arsenic	340	---
	Water Supply	---	6.0	Arsenic(T)	---	0.02
Qualifiers:		D.O. (mg/L)	---	6.0	Beryllium	---
Other:		D.O. (spawning)	---	7.0	Cadmium	TVS(tr) TVS
Temporary Modification(s):		pH	6.5 - 9.0	---	Cadmium(T)	5.0 ---
Arsenic(chronic) = hybrid		chlorophyll a (mg/m ²)	---	150	Chromium III	---
Expiration Date of 12/31/2021		E. Coli (per 100 mL)	---	126	Chromium III(T)	50 ---
*Uranium(acute) = See 33.5(3) for details.		Inorganic (mg/L)			Chromium VI	TVS TVS
*Uranium(chronic) = See 33.5(3) for details.		acute	chronic	Copper	TVS TVS	
		Ammonia	TVS	TVS	Iron	---
		Boron	---	0.75	Iron(T)	---
		Chloride	---	250	Lead	TVS TVS
		Chlorine	0.019	0.011	Lead(T)	50 ---
		Cyanide	0.005	---	Manganese	TVS TVS/WS
		Nitrate	10	---	Mercury(T)	---
		Nitrite	---0.05	0.05---	Molybdenum(T)	---
		Phosphorus	---	0.11	Nickel	TVS TVS
		Sulfate	---	WS	Nickel(T)	---
		Sulfide	---	0.002	Selenium	TVS TVS
					Silver	TVS TVS(tr)
					Uranium	--varies* --varies*
					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 33.6 for further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #33 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Roaring Fork River Basin

10a. Mainstem of Thompson Creek, including all tributaries and wetlands, from the source to the confluence with the Crystal River, except for specific listings in Segment 10b.							
COUCRF10A	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/m ²)	---	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(acute) = See 33.5(3) for details.		Inorganic (mg/L)			Chromium VI	TVS	TVS
*Uranium(chronic) = See 33.5(3) for details.			acute	chronic	Copper	TVS	TVS
		Ammonia	TVS	TVS	Iron	---	WS
		Boron	---	0.75	Iron(T)	---	1000
		Chloride	---	250	Lead	TVS	TVS
		Chlorine	0.019	0.011	Lead(T)	50	---
		Cyanide	0.005	---	Manganese	TVS	TVS/WS
		Nitrate	10	---	Mercury(T)	---	0.01(†)
		Nitrite	---0.05	0.05---	Molybdenum(T)	---	160150
		Phosphorus	---	0.11	Nickel	TVS	TVS
		Sulfate	---	WS	Nickel(T)	---	100
		Sulfide	---	0.002	Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	--varies*	--varies*
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #33 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Roaring Fork River Basin

10b. Mainstem of North Thompson Creek, including all tributaries and wetlands, from the source to the White River National Forest boundary. Mainstem of Middle Thompson Creek, including all tributaries and wetlands, from the source to a point immediately below the confluence with the South Branch of Middle Thompson Creek.							
COUCRF10B	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT		acute	chronic	
OW	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/m ²)	---	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(acute) = See 33.5(3) for details.		Inorganic (mg/L)			Chromium VI	TVS	TVS
*Uranium(chronic) = See 33.5(3) for details.		acute	chronic		Copper	TVS	TVS
		Ammonia	TVS	TVS	Iron	---	WS
		Boron	---	0.75	Iron(T)	---	1000
		Chloride	---	250	Lead	TVS	TVS
		Chlorine	0.019	0.011	Lead(T)	50	---
		Cyanide	0.005	---	Manganese	TVS	TVS/WS
		Nitrate	10	---	Mercury(T)	---	0.01(†)
		Nitrite	---0.05	0.05---	Molybdenum(T)	---	160150
		Phosphorus	---	0.11	Nickel	TVS	TVS
		Sulfate	---	WS	Nickel(T)	---	100
		Sulfide	---	0.002	Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	---varies*	---varies*
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #33 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Roaring Fork River Basin

11. All lakes and reservoirs tributary to the Roaring Fork River within the Maroon Bells/Snowmass, Holy Cross, Raggeds, Collegiate Peaks and Hunter/Fryingpan Wilderness Areas.							
COUCRF11	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT		acute	chronic	
OW	Aq Life Cold 1	Temperature °C	CL,CLLvaries*	CL,CLLvaries*	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
*chlorophyll a (ug/L)(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area. *Phosphorus(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area. *Uranium(acute) = See 33.5(3) for details. *Uranium(chronic) = See 33.5(3) for details. *Temperature = DM and MWAT=CL,CLL from 1/1-3/31 Savage Lake, Ivanhoe Lake DM=CL and MWAT=16.6 from 4/1-12/31 All others DM and MWAT=CL,CLL from 4/1-12/31		chlorophyll a (ug/L)	---	8*	Cadmium(T)	5.0	---
		E. Coli (per 100 mL)	---	126	Chromium III	---	TVS
		Inorganic (mg/L)			Chromium III(T)	50	---
			acute	chronic	Chromium VI	TVS	TVS
		Ammonia	TVS	TVS	Copper	TVS	TVS
		Boron	---	0.75	Iron	---	WS
		Chloride	---	250	Iron(T)	---	1000
		Chlorine	0.019	0.011	Lead	TVS	TVS
		Cyanide	0.005	---	Lead(T)	50	---
		Nitrate	10	---	Manganese	TVS	TVS/WS
		Nitrite	--0.05-	0.05---	Mercury(T)	---	0.01(t)
		Phosphorus	---	0.025*	Molybdenum(T)	---	460150
		Sulfate	---	WS	Nickel	TVS	TVS
		Sulfide	---	0.002	Nickel(T)	---	100
					Selenium	TVS	TVS
			Silver	TVS	TVS(tr)		
			Uranium	--varies*	--varies*		
			Zinc	TVS	TVS		

12. All lakes and reservoirs tributary to the Roaring Fork River, except for the specific listings in Segment 11.							
COUCRF12	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT		acute	chronic	
Reviewable	Aq Life Cold 1	Temperature °C	4/1-12/31 CLLvaries*	20.3varies* ^B	Aluminum	---	---
	DUWS*	Temperature °C	CL,CLL	CL,CLL	Arsenic	340	---
	Recreation E		acute	chronic	Arsenic(T)	---	0.02
	Water Supply	D.O. (mg/L)	---	6.0	Beryllium	---	---
Qualifiers:		D.O. (spawning)	---	7.0	Cadmium(T)	5.0	---
Other:		pH	6.5 - 9.0	---	Chromium III	---	TVS
Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2021 *chlorophyll a (ug/L)(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area. *Classification: DUWS Applies only to Leonard Thomas Res and Wildcat Res *Phosphorus(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area. *Uranium(acute) = See 33.5(3) for details. *Uranium(chronic) = See 33.5(3) for details. *Temperature (4/1-12/31) = Ruedi-Res (MWAT=20.3) DM and MWAT=CL,CLL from 1/31-3/31 Ruedi Reservoir DM=22.4 and MWAT=20.3 from 4/1-12/31 All others DM and MWAT=CL,CLL from 4/1-12/31		chlorophyll a (ug/L)	---	8*	Chromium III(T)	50	---
		E. Coli (per 100 mL)	---	126	Chromium VI	TVS	TVS
		Inorganic (mg/L)			Copper	TVS	TVS
			acute	chronic	Iron	---	WS
		Ammonia	TVS	TVS	Iron(T)	---	1000
		Boron	---	0.75	Lead	TVS	TVS
		Chloride	---	250	Lead(T)	50	---
		Chlorine	0.019	0.011	Manganese	TVS	TVS/WS
		Cyanide	0.005	---	Mercury(T)	---	0.01(t)
		Nitrate	10	---	Molybdenum(T)	---	460150
		Nitrite	--0.05-	0.05---	Nickel	TVS	TVS
		Phosphorus	---	0.025*	Nickel(T)	---	100
		Sulfate	---	WS	Selenium	TVS	TVS
		Sulfide	---	0.002	Silver	TVS	TVS(tr)
					Uranium	--varies*	--varies*
			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 33.6 for further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #33 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS North Platte River Basin

1. All tributaries to the North Platte and Encampment Rivers, including all wetlands, within the Mount Zirkel, Never Summer, and Platte River Wilderness Areas.							
COUCNP01	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute chronic			
OW	Aq Life Cold 1	CS-I	CS-I	Aluminum	---	---	
	Recreation E	acute	chronic	Arsenic	340	---	
	Water Supply	---	6.0	Arsenic(T)	---	0.02	
Qualifiers:		D.O. (mg/L)	---	6.0	Arsenic(T)	0.02	
Other:		D.O. (spawning)	---	7.0	Beryllium	---	
<u>*Uranium(acute) = See 33.5(3) for details.</u> <u>*Uranium(chronic) = See 33.5(3) for details.</u>		pH	6.5 - 9.0	---	Cadmium	TVS(tr) TVS	
		chlorophyll a (mg/m ²)	---	150	Cadmium(T)	5.0	---
		E. Coli (per 100 mL)	---	126	Chromium III	---	
		Inorganic (mg/L)			Chromium III(T)	50	---
		acute	chronic	Chromium VI	TVS	TVS	
		Ammonia	TVS	TVS	Copper	TVS TVS	
		Boron	---	0.75	Iron	---	
		Chloride	---	250	Iron(T)	---	
		Chlorine	0.019	0.011	Lead	TVS TVS	
		Cyanide	0.005	---	Lead(T)	50	
		Nitrate	10	---	Manganese	TVS TVS/WS	
		Nitrite	--0.05-	0.05---	Mercury(T)	---	
		Phosphorus	---	0.11	Molybdenum(T)	---	
		Sulfate	---	WS	Nickel	TVS TVS	
		Sulfide	---	0.002	Nickel(T)	---	
					Selenium	TVS TVS	
					Silver	TVS TVS(tr)	
					Uranium	--varies* --varies*	
					Zinc	TVS TVS	
2. Mainstem of the Encampment River, including all tributaries and wetlands, from the source to the Colorado/Wyoming border, except for those tributaries included in Segment 1.							
COUCNP02	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute chronic			
Reviewable	Aq Life Cold 1	CS-I	CS-I	Aluminum	---	---	
	Recreation P	acute	chronic	Arsenic	340	---	
	Water Supply	---	6.0	Arsenic(T)	---	0.02	
Qualifiers:		D.O. (mg/L)	---	6.0	Beryllium	---	
Other:		D.O. (spawning)	---	7.0	Cadmium	TVS(tr) TVS	
<u>*Uranium(acute) = See 33.5(3) for details.</u> <u>*Uranium(chronic) = See 33.5(3) for details.</u>		pH	6.5 - 9.0	---	Cadmium(T)	5.0	
		chlorophyll a (mg/m ²)	---	150	Chromium III	---	TVS
		E. Coli (per 100 mL)	---	205	Chromium III(T)	50	
		Inorganic (mg/L)			Chromium VI	TVS	TVS
		acute	chronic	Copper	TVS	TVS	
		Ammonia	TVS	TVS	Iron	---	
		Boron	---	0.75	Iron(T)	---	
		Chloride	---	250	Lead	TVS TVS	
		Chlorine	0.019	0.011	Lead(T)	50	
		Cyanide	0.005	---	Manganese	TVS TVS/WS	
		Nitrate	10	---	Mercury(T)	---	
		Nitrite	--0.05-	0.05---	Molybdenum(T)	---	
		Phosphorus	---	0.11	Nickel	TVS TVS	
		Sulfate	---	WS	Nickel(T)	---	
		Sulfide	---	0.002	Selenium	TVS TVS	
					Silver	TVS TVS(tr)	
					Uranium	--varies* --varies*	
					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 33.6 for further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #33 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS North Platte River Basin

3. Mainstem of the North Platte River from the confluence of Grizzly Creek and Little Grizzly Creek to the Colorado/Wyoming border.							
COUCNP03	Classifications	Physical and Biological			Metals (ug/L)		
Designation		DM	MWAT		acute	chronic	
Reviewable	Agriculture						
	Aq Life Cold 1	Temperature °C	CS-II	CS-II	Aluminum	---	---
	Recreation E		acute	chronic	Arsenic	340	---
Water Supply		D.O. (mg/L)	---	6.0	Arsenic(T)	---	0.02
		D.O. (spawning)	---	7.0	Beryllium	---	---
Qualifiers:		pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS
Other: *chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 33.5(4). *Phosphorus(chronic) = applies only above the facilities listed at 33.5(4). <u>*Uranium(acute) = See 33.5(3) for details.</u> <u>*Uranium(chronic) = See 33.5(3) for details.</u>		chlorophyll a (mg/m ²)	---	150*	Cadmium(T)	<u>5.0</u>	---
		E. Coli (per 100 mL)	---	126	Chromium III	---	TVS
					Chromium III(T)	50	---
					Chromium VI	TVS	TVS
					Copper	TVS	TVS
					Iron	---	WS
					Iron(T)	---	1000
					Lead	TVS	TVS
					Lead(T)	<u>50</u>	---
					Manganese	TVS	TVSWS
				Nitrate	---	0.01(†)	
				Nitrite	<u>0.05</u>	<u>0.05</u>	
				Phosphorus	---	0.11*	
				Sulfate	---	WS	
				Sulfide	---	0.002	
				Nickel	TVS	TVS	
				Nickel(T)	---	<u>100</u>	
				Selenium	TVS	TVS	
				Silver	TVS	TVS(tr)	
				Uranium	<u>varies*</u>	<u>varies*</u>	
				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 33.6 for further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #33 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS North Platte River Basin

4a. All tributaries to the North Platte River-system, including all wetlands, from the source to the Colorado/Wyoming border, except for those tributaries included in Segment 1, and specific listings in Segments 1, 4b, 5a, 5b, 6, 7a and 7b.

COUCNP04A	Classifications	Physical and Biological			Metals (ug/L)		
		DM	MWAT	acute	chronic		
Designation Reviewable	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)	---	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/m ²)	---	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(acute) = See 33.5(3) for details.		Inorganic (mg/L)			Chromium VI	TVS	TVS
*Uranium(chronic) = See 33.5(3) for details.			acute	chronic	Copper	TVS	TVS
		Ammonia	TVS	TVS	Iron	---	WS
		Boron	---	0.75	Iron(T)	---	1000
		Chloride	---	250	Lead	TVS	TVS
		Chlorine	0.019	0.011	Lead(T)	50	---
		Cyanide	0.005	---	Manganese	TVS	TVS/WS
		Nitrate	10	---	Mercury(T)	---	0.01(t)
		Nitrite	---0.05	0.05---	Molybdenum(T)	---	160150
		Phosphorus	---	0.11	Nickel	TVS	TVS
		Sulfate	---	WS	Nickel(T)	---	100
		Sulfide	---	0.002	Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	--varies*	--varies*
					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 33.6 for further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #33 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS North Platte River Basin

4b. Mainstem of the Illinois River, including all tributaries and wetlands, from a point immediately below the confluence with Indian Creek to the confluence with the Michigan River, except for specific listings in Segments 7a and 7b. Mainstem of the Canadian River from below 12E Road (40.720033, -106.088912) to the confluence with the North Platte River. All tributaries to the Canadian River, including wetlands, which enter the mainstem of the Canadian River from the southwest side of from below 12E Road to the mainstem confluence with the North Platte River.

COUCNP04B Classifications		Physical and Biological		Metals (ug/L)			
Designation		DM	MWAT		acute	chronic	
Reviewable	Agriculture						
	Aq Life Cold 1	Temperature °C	CS-II	CS-II	Aluminum	---	---
	Recreation E		acute	chronic	Arsenic	340	---
Water Supply		D.O. (mg/L)	---	6.0	Arsenic(T)	---	0.02
		D.O. (spawning)	---	7.0	Beryllium	---	---
Qualifiers:		pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS
Other:		chlorophyll a (mg/m ²)	---	150	Cadmium(T)	5.0	---
Temporary Modification(s):		E. Coli (per 100 mL)	---	126	Chromium III	---	TVS
Arsenic(chronic) = hybrid					Chromium III(T)	50	---
Expiration Date of 12/31/2021					Chromium VI	TVS	TVS
*Uranium(acute) = See 33.5(3) for details.		Inorganic (mg/L)			Copper	TVS	TVS
*Uranium(chronic) = See 33.5(3) for details.			acute	chronic	Iron	---	WS
		Ammonia	TVS	TVS	Iron(T)	---	1000
		Boron	---	0.75	Lead	TVS	TVS
		Chloride	---	250	Lead(T)	50	---
		Chlorine	0.019	0.011	Manganese	TVS	TVSWS
		Cyanide	0.005	---	Mercury(T)	---	0.01(†)
		Nitrate	10	---	Molybdenum(T)	---	160150
		Nitrite	---0.05	0.05---	Nickel	TVS	TVS
		Phosphorus	---	0.11	Nickel(T)	---	100
		Sulfate	---	WS	Selenium	TVS	TVS
		Sulfide	---	0.002	Silver	TVS	TVS(tr)
					Uranium	--varies*	--varies*
					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 33.6 for further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #33 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS North Platte River Basin

5a. Mainstem of the Michigan River from the source to a point immediately below the confluence with the North Fork Michigan River.							
COUCNP05A	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT				
Reviewable	Aq Life Cold 1	CS-I	CS-I	Aluminum	acute	chronic	
	Recreation E	acute chronic		Arsenic	340	---	
	Water Supply	D.O. (mg/L)		Arsenic(T)	---	0.02	
Qualifiers:		D.O. (spawning)		Beryllium	---	---	
Other:		pH		Cadmium	TVS(tr)	TVS	
Temporary Modification(s):		chlorophyll a (mg/m ²)		Cadmium(T)	5.0	---	
Arsenic(chronic) = hybrid		E. Coli (per 100 mL)		Chromium III	---	TVS	
Expiration Date of 12/31/2021				Chromium III(T)	50	---	
*Uranium(acute) = See 33.5(3) for details.		Inorganic (mg/L)			Chromium VI	TVS	TVS
*Uranium(chronic) = See 33.5(3) for details.				Copper	TVS	TVS	
		acute	chronic	Iron	---	WS	
		Ammonia	TVS	Iron(T)	---	1000	
		Boron	---	Lead	TVS	TVS	
		Chloride	---	Lead(T)	50	---	
		Chlorine	0.019	Manganese	TVS	TVS/WS	
		Cyanide	0.005	Mercury(T)	---	0.01(†)	
		Nitrate	10	Molybdenum(T)	---	160-150	
		Nitrite	--0.05	Nickel	TVS	TVS	
		Phosphorus	---	Nickel(T)	---	100	
		Sulfate	---	Selenium	TVS	TVS	
		Sulfide	---	Silver	TVS	TVS(tr)	
				Uranium	--varies*	--varies*	
				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 33.6 for further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #33 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS North Platte River Basin

5b. Mainstem of the Michigan River from a point immediately below the confluence with the North Fork Michigan River to the confluence with the North Platte River.						
COUCNP05B	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT			
Reviewable	Aq Life Cold 1 Recreation N Water Supply	acute	chronic	acute	chronic	
	Temperature °C	CS-II	CS-II	Aluminum	---	---
	D.O. (mg/L)	---	6.0	Arsenic	340	---
	D.O. (spawning)	---	7.0	Arsenic(T)	---	0.02
Qualifiers:	pH	6.5 - 9.0	---	Beryllium	---	---
Other:	chlorophyll a (mg/m ²)	---	---	Cadmium	TVS(tr)	TVS
Temporary Modification(s):	E. Coli (per 100 mL)	---	630	Cadmium(T)	5.0	---
Arsenic(chronic) = hybrid				Chromium III	---	TVS
Expiration Date of 12/31/2021				Chromium III(T)	50	---
*Phosphorus(chronic) = applies only above the facilities listed at 33.5(4).				Chromium VI	TVS	TVS
*Uranium(acute) = See 33.5(3) for details.				Copper	TVS	TVS
*Uranium(chronic) = See 33.5(3) for details.				Iron	---	WS
	Inorganic (mg/L)			Iron(T)	---	1000
	acute	chronic		Lead	TVS	TVS
	Ammonia	TVS	TVS	Lead(T)	50	---
	Boron	---	0.75	Manganese	TVS	TVS/WS
	Chloride	---	250	Mercury(T)	---	0.01(†)
	Chlorine	0.019	0.011	Molybdenum(T)	---	460/150
	Cyanide	0.005	---	Nickel	TVS	TVS
	Nitrate	10	---	Nickel(T)	---	100
	Nitrite	---0.05	0.05---	Selenium	TVS	TVS
	Phosphorus	---	0.11*	Silver	TVS	TVS(tr)
	Sulfate	---	WS	Uranium	--varies*	--varies*
	Sulfide	---	0.002	Zinc	TVS	TVS

6. Mainstem of Pinkham Creek from the Routt National Forest boundary to the confluence with the North Platte River.						
COUCNP06	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT			
Reviewable	Aq Life Cold 1 Recreation N Water Supply	acute	chronic	acute	chronic	
	Temperature °C	CS-I	CS-I	Aluminum	---	---
	D.O. (mg/L)	---	6.0	Arsenic	340	---
	D.O. (spawning)	---	7.0	Arsenic(T)	---	0.02
Qualifiers:	pH	6.5 - 9.0	---	Beryllium	---	---
Other:	chlorophyll a (mg/m ²)	---	---	Cadmium	TVS(tr)	TVS
*Uranium(acute) = See 33.5(3) for details.	E. Coli (per 100 mL)	---	630	Cadmium(T)	5.0	---
*Uranium(chronic) = See 33.5(3) for details.				Chromium III	---	TVS
				Chromium III(T)	50	---
	Inorganic (mg/L)			Chromium VI	TVS	TVS
	acute	chronic		Copper	TVS	TVS
	Ammonia	TVS	TVS	Iron	---	WS
	Boron	---	0.75	Iron(T)	---	1000
	Chloride	---	250	Lead	TVS	TVS
	Chlorine	0.019	0.011	Lead(T)	50	---
	Cyanide	0.005	---	Manganese	TVS	TVS/WS
	Nitrate	10	---	Mercury(T)	---	0.01(†)
	Nitrite	---0.05	0.05---	Molybdenum(T)	---	460/150
	Phosphorus	---	0.11	Nickel	TVS	TVS
	Sulfate	---	WS	Nickel(T)	---	100
	Sulfide	---	0.002	Selenium	TVS	TVS
				Silver	TVS	TVS(tr)
				Uranium	--varies*	--varies*
				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 33.6 for further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #33 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS North Platte River Basin

7a. Mainstem of Government Creek from the boundary of the Colorado State Forest to the confluence with the Canadian River. Mainstem of Spring Creek from the source to the the outlet of Spring Creek (Number 31) Reservoir.							
COUCNP07A	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture		DM	MWAT		acute	chronic
Reviewable	Aq Life Cold 2 Recreation N	Temperature °C	CS-I	CS-I	Aluminum	---	---
Qualifiers:			acute	chronic	Arsenic	340	---
Fish Ingestion <u>Standards Apply</u>		D.O. (mg/L)	---	6.0	Arsenic(T)	---	7.6
Other:		D.O. (spawning)	---	7.0	Beryllium	---	---
		pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS
		chlorophyll a (mg/m ²)	---	---	Chromium III	TVS	TVS
		E. Coli (per 100 mL)	---	630	Chromium III(T)	---	100
			Inorganic (mg/L)		Chromium VI	TVS	TVS
			acute	chronic	Copper	TVS	TVS
		Ammonia	TVS	TVS	Iron(T)	---	1000
		Boron	---	0.75	Lead	TVS	TVS
		Chloride	---	---	Manganese	TVS	TVS
		Chlorine	0.019	0.011	Mercury(T)	---	0.01(†)
		Cyanide	0.005	---	Molybdenum(T)	---	160 150
		Nitrate	100	---	Nickel	TVS	TVS
		Nitrite	0.05	0.05	Selenium	TVS	TVS
		Phosphorus	---	0.11	Silver	TVS	TVS(tr)
		Sulfate	---	---	Uranium	varies*	varies*
		Sulfide	---	0.002	Zinc	TVS	TVS
7b. Mainstem of Spring Creek from the outlet of Spring Creek (Number 31) Reservoir to the confluence with the Illinois River.							
COUCNP07B	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture		DM	MWAT		acute	chronic
Reviewable	Aq Life Cold 2 Recreation NE	Temperature °C	CS-II	CS-II	Aluminum	---	---
Qualifiers:			acute	chronic	Arsenic	340	---
Fish Ingestion <u>Standards Apply</u>		D.O. (mg/L)	---	6.0	Arsenic(T)	---	7.6
Other:		D.O. (spawning)	---	7.0	Beryllium	---	---
		pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS
		chlorophyll a (mg/m ²)	---	150	Chromium III	TVS	TVS
		E. Coli (per 100 mL)	---	630 126	Chromium III(T)	---	100
			Inorganic (mg/L)		Chromium VI	TVS	TVS
			acute	chronic	Copper	TVS	TVS
		Ammonia	TVS	TVS	Iron(T)	---	1000
		Boron	---	0.75	Lead	TVS	TVS
		Chloride	---	---	Manganese	TVS	TVS
		Chlorine	0.019	0.011	Mercury(T)	---	0.01(†)
		Cyanide	0.005	---	Molybdenum(T)	---	160 150
		Nitrate	100	---	Nickel	TVS	TVS
		Nitrite	0.05	0.05	Selenium	TVS	TVS
		Phosphorus	---	0.11	Silver	TVS	TVS(tr)
		Sulfate	---	---	Uranium	varies*	varies*
		Sulfide	---	0.002	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 33.6 for further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #33 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS North Platte River Basin

8. All lakes and reservoirs <u>tributary to the North Platte and Encampment Rivers</u> within the Mount Zirkel, Never Summer, and Platte River Wilderness Areas.								
COUCNP08	Classifications	Physical and Biological			Metals (ug/L)			
Designation		DM	MWAT		acute	chronic		
OW	Agriculture							
	Aq Life Cold 1	Temperature °C	<u>GL,CLLvaries*</u>	<u>GL,CLLvaries*</u>	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	
<p>*chlorophyll a (ug/L)(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area.</p> <p>*Phosphorus(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area.</p> <p>*Uranium(acute) = See 33.5(3) for details.</p> <p>*Uranium(chronic) = See 33.5(3) for details.</p> <p>*Temperature =</p> <p>DM and MWAT=CL,CLL from 1/1-3/31</p> <p>Blue Lake, Lower Big Twin Lake, Katherine Lake</p> <p>DM=CL and MWAT=16.6 from 4/1-12/31</p> <p>All others</p> <p>DM and MWAT=CL,CLL from 4/1-12/31</p>			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	<u>---0.05</u>	<u>0.05---</u>	Manganese	TVS	TVS/WS	
		Phosphorus	---	0.025*	Mercury(T)	---	0.01(t)	
		Sulfate	---	WS	Molybdenum(T)	---	160 150	
		Sulfide	---	0.002	Nickel	TVS	TVS	
					Nickel(T)	---	100	
					Selenium	TVS	TVS	
					Silver	TVS	TVS(tr)	
			Uranium	<u>---varies*</u>	<u>---varies*</u>			
			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 33.6 for further details on applied standardsfor details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #33 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS North Platte River Basin

9. All lakes and reservoirs tributary to the North Platte and Encampment Rivers except for specific listings in Segment 8.									
COUCNP09	Classifications	Physical and Biological			Metals (ug/L)				
Designation	Agriculture		DM	MWAT		acute chronic			
Reviewable	Aq Life Cold 1	Temperature °C	4/1-12/31- <u>CLLvaries*</u>	18.8varies* ^B	Aluminum	---	---		
	Recreation E	Temperature °C	4/1-12/31- <u>CLL*</u>	20.1*	Arsenic	340	---		
	Water Supply	Temperature °C	4/1-12/31- <u>CLL*</u>	1.2*	Arsenic(T)	---	0.02		
Qualifiers:		Temperature °C	<u>CL,CLL</u>	<u>CL,CLL</u>	Beryllium	---	---		
Other:			acute	chronic	Cadmium	TVS(tr)	TVS		
*chlorophyll a (ug/L)(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area. *Phosphorus(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area. *Temperature(4/1-12/31) = South Delaney Lake (MWAT=18.8) *Temperature(DM) = See section 33.6(4) for temperature standards. *Temperature(MWAT) = See section 33.6(4) for temperature standards. *Temperature(4/1-12/31) = North Delaney Lake (MWAT=20.1) *Uranium(acute) = See 33.5(3) for details. *Uranium(chronic) = See 33.5(3) for details. (4/1-12/31) = Lake John (MWAT=1.2) =		D.O. (mg/L)	---	6.0	Cadmium(T)	<u>5.0</u>	---		
		D.O. (spawning)	---	7.0	Chromium III	---	TVS		
		pH	6.5 - 9.0	---	Chromium III(T)	50	---		
		chlorophyll a (ug/L)	---	8*	Chromium VI	TVS	TVS		
		E. Coli (per 100 mL)	---	126	Copper	TVS	TVS		
					Iron	---	WS		
					Iron(T)	---	1000		
					Inorganic (mg/L)				
					acute	chronic	Lead(T)	<u>50</u>	---
		Ammonia	TVS	TVS	Manganese	TVS	TVS/WS		
		Boron	---	0.75	Mercury(T)	---	0.01(t)		
		Chloride	---	250	Molybdenum(T)	---	160 <u>150</u>		
		Chlorine	0.019	0.011	Nickel	TVS	TVS		
		Cyanide	0.005	---	Nickel(T)	---	<u>100</u>		
Nitrate	10	---	Selenium	TVS	TVS				
Nitrite	0.05	0.05	Silver	TVS	TVS(tr)				
Phosphorus	---	0.025*	Uranium	varies*	varies*				
Sulfate	---	WS	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 33.6 for further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

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

1. All tributaries to the Yampa River, including all wetlands, which are within the Mount Zirkel, Flat Tops and Sarvis Creek Wilderness Areas.							
COUCYA01	Classifications	Physical and Biological			Metals (ug/L)		
Designation		DM	MWAT		acute	chronic	
OW	Agriculture Aq Life Cold 1 Recreation E Water Supply	Temperature °C	CS-I	CS-I	Aluminum	---	---
			acute	chronic	Arsenic	340	---
		D.O. (mg/L)	---	6.0	Arsenic(T)	---	0.02
		D.O. (spawning)	---	7.0	Beryllium	---	---
Qualifiers:		pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS
Other:		chlorophyll a (mg/m ²)	---	150	Cadmium(T)	<u>5.0</u>	---
Temporary Modification(s):		E. Coli (per 100 mL)	---	126	Chromium III	---	TVS
Arsenic(chronic) = hybrid		Inorganic (mg/L)			Chromium III(T)	50	---
Expiration Date of 12/31/2021					Chromium VI	TVS	TVS
*Uranium(acute) = See 33.5(3) for details.						acute	chronic
*Uranium(chronic) = See 33.5(3) for details.		Ammonia	TVS	TVS	Copper	TVS	TVS
		Boron	---	0.75	Iron	---	WS
		Chloride	---	250	Iron(T)	---	1000
		Chlorine	0.019	0.011	Lead	TVS	TVS
		Cyanide	0.005	---	Lead(T)	<u>50</u>	---
		Nitrate	10	---	Manganese	TVS	TVS/WS
		Nitrite	0.05	0.05	Mercury(T)	---	0.01(†)
		Phosphorus	---	0.11	Molybdenum(T)	---	160150
		Sulfate	---	WS	Nickel	TVS	TVS
		Sulfide	---	0.002	Nickel(T)	---	<u>100</u>
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	varies*	varies*
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

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

2b. Mainstem of the Yampa River from a point immediately above the confluence with Oak Creek to a point immediately below the confluence with Elkhead Creek.							
COUCYA02B	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT				
Reviewable	Aq Life Cold 1 Recreation E Water Supply	varies*CS-II	varies*CS-II		acute	chronic	
Qualifiers:		acute	chronic				
Other:		Inorganic (mg/L)					
Temporary Modification(s):		Temperature °C		Aluminum	---	---	
Arsenic(chronic) = hybrid		D.O. (mg/L)	---	Arsenic	340	---	
Expiration Date of 12/31/2021		D.O. (spawning)	---	Arsenic(T)	---	0.02	
*Uranium(acute) = See 33.5(3) for details.		pH	6.5 - 9.0	Beryllium	---	---	
*Uranium(chronic) = See 33.5(3) for details.		chlorophyll a (mg/m ²)	---	Cadmium	TVS(tr)	TVS	
*Temperature(DM) = See 33.6(4) for temperature standards.		E. Coli (per 100 mL)	---	Cadmium(T)	5.0	---	
*Temperature(MWAT) = See 33.6(4) for temperature standards.					Chromium III	---	TVS
					Chromium III(T)	50	---
					Chromium VI	TVS	TVS
					Copper	TVS	TVS
					Iron	---	WS
					Iron(T)	---	1000
					Lead	TVS	TVS
					Lead(T)	50	---
					Manganese	TVS	TVS/WS
					Mercury(T)	---	0.01(t)
					Molybdenum(T)	---	160150
					Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	--varies*	--varies*
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

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

3. All tributaries to the Yampa River, including all wetlands, from the source to above the confluence with the Elk River, except for specific listings in Segments ~~4-8, 13a-f1~~ and ~~194-7~~. Mainstem of the Bear River, including all tributaries and wetlands, from the boundary of the Flat Tops Wilderness Area to the confluence with the Yampa River.

COUCYA03	Classifications	Physical and Biological			Metals (ug/L)		
		DM	MWAT	acute	chronic		
Designation Reviewable	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)	---	0.02
Qualifiers:		D.O. (spawning)	---	7.0	Beryllium	---	---
	Other: Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2021 *chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 33.5(4). *Phosphorus(chronic) = applies only above the facilities listed at 33.5(4). <u>*Uranium(acute) = See 33.5(3) for details.</u> <u>*Uranium(chronic) = See 33.5(3) for details.</u>		pH	6.5 - 9.0	---	Cadmium	TVS(tr)
		chlorophyll a (mg/m ²)	---	150*	<u>Cadmium(T)</u>	<u>5.0</u>	---
		E. Coli (per 100 mL)	---	126	Chromium III	---	TVS
					Chromium III(T)	50	---
					Chromium VI	TVS	TVS
					Copper	TVS	TVS
					Iron	---	WS
					Iron(T)	---	1000
					Lead	TVS	TVS
					<u>Lead(T)</u>	<u>50</u>	---
					Manganese	TVS	TVS/WS
					Mercury(T)	---	0.01(†)
					Molybdenum(T)	---	160 <u>150</u>
					Nickel	TVS	TVS
					<u>Nickel(T)</u>	---	<u>100</u>
				Selenium	TVS	TVS	
				Silver	TVS	TVS(tr)	
				Uranium	varies*	varies*	
				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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

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

4. Mainstem of Little White Snake Creek from the source to the confluence with the Yampa River.							
COUCYA04	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute	chronic		
Reviewable	Aq Life Cold 2 Recreation N Water Supply	CS-II	CS-II	---	---		
Qualifiers:		acute	chronic	Aluminum	---	---	
Other:		Temperature °C		Arsenic	340	---	
		D.O. (mg/L)	---	6.0	Arsenic(T)	---	0.02-10 ^A
		D.O. (spawning)	---	7.0	Beryllium	---	---
		pH	6.5 - 9.0	---	Cadmium	--TVS(tr)	--TVS
		chlorophyll a (mg/m ²)	---	---	Cadmium(T)	5.0	---
		E. Coli (per 100 mL)	---	630	Chromium III	---	--TVS
		Inorganic (mg/L)			Chromium III(T)	50	---
		acute	chronic	Chromium VI	--TVS	--TVS	
		Ammonia	--TVS	--TVS	Chromium VI(T)	50	---
		Boron	---	0.75	Copper	--TVS	--TVS
		Chloride	---	250	Copper(T)	---	200
		Chlorine	-0.019	-0.011	Iron	---	WS
		Cyanide	0.005	---	Iron(T)	---	1000
		Nitrate	10	---	Lead	--TVS	--TVS
		Nitrite	--0.05	0.05	Lead(T)	50	---
		Phosphorus	---	0.11*	Manganese	TVS	TVS/WS
		Sulfate	---	WS	Mercury(T)	2.0	--0.01
		Sulfide	---	0.002	Molybdenum(T)	---	160150
					Nickel	--TVS	--TVS
					Nickel(T)	---	100
					Selenium	--TVS	--TVS
					Selenium(T)	---	20
					Silver	--TVS	--TVS(tr)
					Silver(T)	400	---
					Uranium	--varies*	--varies*
					Zinc(T)	2000TVS	2000TVS

*Phosphorus(chronic) = applies only above the facilities listed at 33.5(4).

*Uranium(acute) = See 33.5(3) for details.

*Uranium(chronic) = See 33.5(3) for details.

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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

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

5. Mainstem of Chimney Creek and Phillips Creek, including all tributaries and wetlands, which are not on National Forest lands, from the ir sources to the confluence with the Yampa River.

COUCYA05	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT		acute	chronic	
Reviewable	Aq Life Cold 1	CS-I	CS-I	Aluminum	---	---	
	Recreation P	acute	chronic	Arsenic	340	---	
	<u>Water Supply</u>			Arsenic(T)	---	<u>7.60.02</u>	
Qualifiers:				Beryllium	---	---	
Other:				Cadmium	TVS(tr)	TVS	
<u>Temporary Modification(s):</u>				<u>Cadmium(T)</u>	<u>5.0</u>	---	
<u>Arsenic(chronic) = hybrid</u>				Chromium III	<u>TVS---</u>	TVS	
<u>Expiration Date of 12/31/2021</u>				Chromium III(T)	<u>---50</u>	<u>400---</u>	
		Inorganic (mg/L)		Chromium VI	TVS	TVS	
		acute	chronic	Copper	TVS	TVS	
<u>*Uranium(acute) = See 33.5(3) for details.</u>				Iron	---	<u>WS</u>	
<u>*Uranium(chronic) = See 33.5(3) for details.</u>				Iron(T)	---	1000	
				Lead	TVS	TVS	
				<u>Lead(T)</u>	<u>50</u>	---	
				Manganese	TVS	TVS/ <u>WS</u>	
				Mercury(T)	---	0.01(†)	
				Molybdenum(T)	---	<u>460.150</u>	
				Nickel	TVS	TVS	
				<u>Nickel(T)</u>	---	<u>100</u>	
				Selenium	TVS	TVS	
				Silver	TVS	TVS(tr)	
				Uranium	<u>---varies*</u>	<u>---varies*</u>	
				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 33.6 for further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

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

6. Mainstem of Oak Creek, including all tributaries and wetlands, from the source to a point 0.25 mile below County Road 27. (40.279241, -106.965405).						
COUCYA06	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	acute		chronic
Reviewable	Aq Life Cold 1 Recreation E Water Supply	CS-I	CS-I	Aluminum	---	---
Qualifiers:		acute	chronic	Arsenic	340	---
Other:		D.O. (mg/L)	---	6.0	Arsenic(T)	---
Temporary Modification(s):		D.O. (spawning)	---	7.0	Beryllium	---
Arsenic(chronic) = hybrid		pH	6.5 - 9.0	---	Cadmium	TVS(tr)
Expiration Date of 12/31/2021		chlorophyll a (mg/m ²)	---	150	Cadmium(T)	5.0
*Uranium(acute) = See 33.5(3) for details.		E. Coli (per 100 mL)	---	126	Chromium III	---
*Uranium(chronic) = See 33.5(3) for details.		Inorganic (mg/L)			Chromium III(T)	50
					Chromium VI	TVS
					Copper	TVS
					Iron	---
					Iron(T)	---
					Lead	TVS
					Lead(T)	50
					Manganese	TVS
					Mercury(T)	---
					Molybdenum(T)	---
					Nickel	TVS
					Nickel(T)	---
					Selenium	TVS
					Silver	TVS
					Uranium	--varies*
					Zinc	TVS

~~77a. Mainstem of Oak Creek, including all tributaries and wetlands, from a point 0.25 mile below County Road 27 to the confluence with the Yampa River. (40.279241, -106.965405) to point 0.25 mile above County Road 35A (40.353357, -106.929195).~~

COUCYA07 COUCYA07A						
COUCYA07	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	acute		chronic
Reviewable	Aq Life Cold 1 Recreation P Water Supply	CS-II	CS-II	Aluminum	---	---
Qualifiers:		acute	chronic	Arsenic	340	---
Other:		D.O. (mg/L)	---	6.0	Arsenic(T)	---
Temporary Modification(s):		D.O. (spawning)	---	7.0	Beryllium	0.027.6
Arsenic(chronic) = hybrid		pH	6.5 - 9.0	---	Cadmium	TVS(tr)
Expiration Date of 12/31/2021		chlorophyll a (mg/m ²)	---	150*	Chromium III	--TVS
*chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 33.5(4).		E. Coli (per 100 mL)	---	205	Chromium III(T)	50---
*Phosphorus(chronic) = applies only above the facilities listed at 33.5(4).		Inorganic (mg/L)			Chromium VI	TVS
*Uranium(acute) = See 33.5(3) for details.					Copper	TVS
*Uranium(chronic) = See 33.5(3) for details.					Iron	---
					Iron(T)	---
					Lead	TVS
					Manganese	TVS
					Mercury(T)	---
					Molybdenum(T)	---
					Nickel	TVS
					Selenium	TVS
					Silver	TVS
					Uranium	--varies*
					Zinc	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 33.6 for further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

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

8. Mainstem of the Elk River, including, all tributaries and wetlands, from the source to the confluence with the Yampa River, except for those tributaries included in Segments 1, ~~20a and 20b~~, and 20a. Mainstem of the West Fork Elk River from the source to the confluence with the Yampa River.

COUCYA08	Classifications	Physical and Biological			Metals (ug/L)		
		DM	MWAT	acute	chronic		
Designation	Agriculture						
	Aq Life Cold 1	Temperature °C	CS-I	CS-I	Aluminum	---	---
	Recreation E		acute	chronic	Arsenic	340	---
Reviewable	Water Supply	D.O. (mg/L)	---	6.0	Arsenic(T)	---	0.02
		D.O. (spawning)	---	7.0	Beryllium	---	---
		pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS
Qualifiers:	Other: Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2021 *chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 33.5(4). *Phosphorus(chronic) = applies only above the facilities listed at 33.5(4). *Uranium(acute) = See 33.5(3) for details. *Uranium(chronic) = See 33.5(3) for details.	Inorganic (mg/L)			Cadmium(T)	5.0	---
		chlorophyll a (mg/m ²)	---	150*	Chromium III	---	TVS
		E. Coli (per 100 mL)	---	126	Chromium III(T)	50	---
					Chromium VI	TVS	TVS
			acute	chronic	Copper	TVS	TVS
		Ammonia	TVS	TVS	Iron	---	WS
		Boron	---	0.75	Iron(T)	---	1000
		Chloride	---	250	Lead	TVS	TVS
		Chlorine	0.019	0.011	Lead(T)	50	---
		Cyanide	0.005	---	Manganese	TVS	TVS/WS
		Nitrate	10	---	Mercury(T)	---	0.01(†)
		Nitrite	---0.05	0.05---	Molybdenum(T)	---	160150
		Phosphorus	---	0.11*	Nickel	TVS	TVS
		Sulfate	---	WS	Nickel(T)	---	100
		Sulfide	---	0.002	Selenium	TVS	TVS
			Silver	TVS	TVS(tr)		
			Uranium	--varies*	--varies*		
			Zinc	TVS	TVS/TVS(sc)		

9. Deleted.

COUCYA09	Classifications	Physical and Biological			Metals (ug/L)		
		DM	MWAT	acute	chronic		
Designation							
Qualifiers:							
Other:							
	Inorganic (mg/L)						
		acute	chronic				

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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

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

10. Deleted.						
COUCYA10	Classifications	Physical and Biological			Metals (ug/L)	
Designation		DM	MWAT	acute	chronic	
Qualifiers:		acute	chronic			
Other:		Inorganic (mg/L)				
		acute	chronic			
11. Fish Creek, including all tributaries and wetlands, from the source to County Road 27, (40.355559, -107.105131) , except for specific listings in Segment 2020a .						
COUCYA11	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	acute	chronic	
Reviewable	Aq Life Cold 21 Recreation N Water Supply	acute	chronic			
Qualifiers:						
Other:						
	Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2021 *Uranium(acute) = See 33.5(3) for details. *Uranium(chronic) = See 33.5(3) for details.					
		Inorganic (mg/L)				
		acute	chronic			
	Temperature °C	CS-I	CS-I	Aluminum	---	---
	D.O. (mg/L)	---	6.0	Arsenic	340	---
	D.O. (spawning)	---	7.0	Arsenic(T)	---	4000.02
	pH	6.5 - 9.0	---	Beryllium	---	---
	chlorophyll a (mg/m ²)	---	---	Cadmium	-TVS(tr)	--TVS
	E. Coli (per 100 mL)	---	630	Cadmium(T)	--5.0	40--
				Chromium III	---	--TVS
				Chromium III(T)	--50	400--
				Chromium VI	--TVS	--TVS
				Chromium VI(T)	---	400
	Ammonia	--TVS	--TVS	Copper	--TVS	--TVS
	Boron	---	0.75	Copper(T)	200	---
	Chloride	---	--250	Iron	---	--WS
	Chlorine	--0.019	--0.011	Iron(T)	---	1000
	Cyanide	0.2005	---	Lead	--TVS	--TVS
	Nitrate	40010	---	Lead(T)	--50	400--
	Nitrite	--0.05	0.05--	Manganese	--TVS	--TVSWS
	Phosphorus	---	0.11	ManganeseMercury(T)	---	2000.01
	Sulfate	---	--WS	Mercury	---	---
	Sulfide	---	0.002	Molybdenum(T)	---	460150
				Nickel	--TVS	--TVS
				Nickel(T)	---	200100
				Selenium	--TVS	--TVS
				Selenium(T)	---	20
				Silver	--TVS	--TVS(tr)
				Uranium	--varies*	--varies*
				Zinc	--TVS	TVS/TVS(sc)
				Zinc(T)	---	2000

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 further details on applied standards](#) for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

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

12. All tributaries to the Yampa River, including all wetlands, from above the confluence with the Elk River to above the confluence with Elkhead Creek, ~~which are not on National Forest lands,~~ except for specific listings in Segments 8, 11, 13a-13j and 13a-fj20a.

COUCYA12	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT		acute	chronic	
Reviewable	Aq Life Cold 2	CS-II	CS-II	Aluminum	---	---	
	Recreation N	acute	chronic	Arsenic	340	---	
Qualifiers:		D.O. (mg/L)	6.0	Arsenic(T)	---	100	
Other:		D.O. (spawning)	7.0	Beryllium	---	---	
		pH	6.5 - 9.0	Cadmium	TVS(tr)	TVS	
		chlorophyll a (mg/m ²)	---	Cadmium(T)	---	10	
		E. Coli (per 100 mL)	630	Chromium III	TVS	TVS	
		Inorganic (mg/L)			Chromium III(T)	---	100
		acute	chronic	Chromium VI	TVS	TVS	
		Ammonia	TVS	Chromium VI(T)	---	100	
		Boron	0.75	Copper	TVS	TVS	
		Chloride	---	CopperIron(T)	200---	1000---	
		Chlorine	0.019	Iron	---	---	
		Cyanide	0.2005	Lead	TVS	TVS	
		Nitrate	100	Lead(T)	---	100	
		Nitrite	0.05	Manganese	TVS	TVS	
		Phosphorus	0.11	ManganeseMercury(T)	---	2000.01	
		Sulfate	---	Mercury	---	---	
		Sulfide	0.002	Molybdenum(T)	---	100150	
				Nickel	TVS	TVS	
				Nickel(T)	---	200	
				Selenium	TVS	TVS	
				Selenium(T)	---	20	
				Silver	TVS	TVS(tr)	
				Uranium	varies*	varies*	
				Zinc	TVS	TVS	
				Zinc(T)	---	2000	

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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

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

13a. Mainstem of Trout Creek, including all tributaries and wetlands, from the source to the confluence with the Yampa River, which are not on National Forest lands, headgate of Spruce Hill Ditch (40.317190, -107.005110), except for specific listings in Segments 13b, 13c, 13f, 1 and 13g, 20a. Mainstem of Middle Creek, including all tributaries and wetlands, from the source to County Road 27 (40.339183, -107.025533), except for specific listings in Segment 20a.							
COUCYA13A	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute chronic			
Reviewable	Aq Life Cold 1 Recreation E Water Supply	Temperature °C	CS-I	CS-I	Aluminum	---	---
		acute	chronic		Arsenic	340	---
		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/m ²)	---	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	---
		Inorganic (mg/L)			Chromium VI	TVS	TVS
		acute	chronic		Copper	TVS	TVS
*Uranium(acute) = See 33.5(3) for details.		Ammonia	TVS	TVS	Iron	---	WS
*Uranium(chronic) = See 33.5(3) for details.		Boron	---	0.75	Iron(T)	---	1000
		Chloride	---	250	Lead	TVS	TVS
		Chlorine	0.019	0.011	Lead(T)	50	---
		Cyanide	0.005	---	Manganese	TVS	TVS/WS
		Nitrate	10	---	Mercury(T)	---	0.01(†)
		Nitrite	--0.05-	0.05---	Molybdenum(T)	---	460150
		Phosphorus	---	0.11	Nickel	TVS	TVS
		Sulfate	---	WS	Nickel(T)	---	100
		Sulfide	---	0.002	Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	--varies*	--varies*
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #33 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Yampa River Basin

13b. Mainstem of Foidel Creek, including all tributaries and wetlands, <u>from the source to the confluence with Middle Creek</u> . Mainstem of Fish Creek, including all tributaries <u>and wetlands</u> , from County Road 27 <u>downstream(40.355559, -107.105131)</u> to the confluence with Trout Creek, except for specific listings in Segment 13g. <u>Mainstem of Middle Creek and, including all tributaries and wetlands</u> , from County Road 27 <u>downstream(40.339183, -107.025533)</u> to the confluence with Trout Creek.							
COUCYA13B	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM		MWAT		acute	chronic
Reviewable	Aq Life Warm 1 Recreation E	Temperature °C	<u>varies</u> ^{WS-II}	<u>varies</u> ^{WS-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(†)	TVS
Selenium (chronic) = current conditions*		chlorophyll a (mg/m ²)	---	150	Chromium III	TVS	TVS
Expiration Date of 12/31/2022		E. Coli (per 100 mL)	---	126	Chromium III(T)	---	100
			Inorganic (mg/L)		Chromium VI	TVS	TVS
*Iron(T)(chronic) = See section 33.6(4) for iron assessment locations.			acute	chronic	Copper	TVS	TVS
Iron(T)(chronic) = 2,090(T) ug/L for Middle Creek.		Ammonia	TVS	TVS	Iron(T)	---	4000 ^{varies}
See section 33.6(4) for iron standards and assessment locations for Foidel Creek and Middle Creek.		Boron	---	0.75	Iron(T) 3/1-6/30	---	2090*1000
*Uranium(acute) = See 33.5(3) for details.		Chloride	---	---	Lead	TVS	TVS
*Uranium(chronic) = See 33.5(3) for details.		Chlorine	0.019	0.011	Manganese	TVS	TVS
*TempMod: Selenium = for applies to Foidel Creek and Middle CreeksCreek.		Cyanide	0.005	---	Mercury(T)	---	0.01(†)
*Temperature(DM) = See 33.6(4) for temperature standards.		Nitrate	100	---	Molybdenum(T)	---	460150
*Temperature(MWAT) = See 33.6(4) for temperature standards.		Nitrite	0.05	0.05	Nickel	TVS	TVS
		Phosphorus	---	0.11	Selenium	TVS	TVS
		Sulfate	---	---	Silver	TVS	TVS(†)
		Sulfide	---	0.002	Uranium	varies*	varies*
					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 33.6 for further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

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

13c. Mainstem of Trout Creek, including all tributaries and wetlands, from the headgate of Spruce Hill Ditch (approximately 2,500 feet north of where County Road 27 crosses Trout Creek 40.317190, -107.005110) to its confluence with Fish Creek. All tributaries to Trout Creek from the headgate of Spruce Hill Ditch (approximately 2,500 feet north of where County Road 27 crosses Trout Creek) to County Road 179, except for specific listings in Segment 13b.

COUCYA13C	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT		acute	chronic	
Reviewable	Aq Life Cold 1	Temperature °C	CS-II	CS-II	Aluminum	---	---
	Recreation E		acute	chronic	Arsenic	340	---
	Water Supply 6/1-2/29	D.O. (mg/L)	---	6.0	Arsenic(T)	---	7.6*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/m ²)	---	150	Cadmium(T)	5.0	---
Arsenic(chronic) = hybrid	6/1-2/29	E. Coli (per 100 mL)	---	126	Chromium III	TVS*---	TVS
Expiration Date of 12/31/2021					Chromium III(T)	---50	400---
					Chromium VI	TVS	TVS
					Copper	TVS	TVS
					Iron	6/1-2/29	---
					Iron(T)	---	1000
					Lead	TVS	TVS
					Lead(T)	50	---
					Manganese	TVS	TVS*WS
					Mercury(T)	---	0.01(t)
					Molybdenum(T)	---	160150
					Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	--varies*	--varies*
					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 33.6 for further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

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

13d. Mainstem of Dry Creek, including all tributaries and wetlands, from the source to just above the confluence with Temple Gulch.								
COUCYA13D	Classifications	Physical and Biological			Metals (ug/L)			
Designation	Agriculture	DM	MWAT		acute	chronic		
UP	Aq Life Warm 2 Recreation E	Temperature °C	WS-II	WS-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):	3/1 - 4/30	chlorophyll a (mg/m ²)	---	150	Cadmium	TVS	TVS	
Iron(chronic) = current condition		E. Coli (per 100 mL)	---	126	Chromium III	TVS	TVS	
Expiration Date of 6/30/2023		Inorganic (mg/L)			Chromium III(T)	---	100	
Selenium(chronic) = current conditions			acute	chronic	Chromium VI	TVS	TVS	
Expiration Date of 12/31/2022		Ammonia	TVS	TVS	Copper	TVS	TVS	
Iron(T)(chronic) = See section 33.6(4) for iron standards and assessment locations.		Boron	---	0.75	Iron(T)	5/1-2/29	---	1110varies
Uranium(acute) = See 33.5(3) for details.		Chloride	---	---	Iron(T)	3/1-4/30	---	3040
*Uranium(chronic) = See 33.5(3) for details.		Chlorine	0.019	0.011	Lead	TVS	TVS	
*Iron(T) chronic = See section 33.6(4) for iron assessment locations details.		Cyanide	0.005	---	Manganese	TVS	TVS	
		Nitrate	100	---	Mercury(T)	---	0.01(t)	
	Nitrite	---0.05	0.05---	Molybdenum(T)	---	160150		
	Phosphorus	---	0.17	Nickel	TVS	TVS		
	Sulfate	---	---	Selenium	TVS	TVS		
	Sulfide	---	0.002	Silver	TVS	TVS		
				Uranium	---varies*	---varies*		
				Zinc	TVS	TVS		

13e. Mainstem of Sage Creek, including all tributaries and wetlands, from its source the source to the confluence with the Yampa River.							
COUCYA13E	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT		acute	chronic	
UP	Aq Life Warm 2 Recreation N <u>Water Supply</u>	Temperature °C	WS-II	WS-II	Aluminum	---	---
			acute	chronic	Arsenic	340	---
Qualifiers:		D.O. (mg/L)	---	5.0	Arsenic(T)	---	1000_02-10 ^Δ
Other:		pH	6.5 - 9.0	---	Beryllium	---	---
Temporary Modification(s):	3/1 - 4/30	chlorophyll a (mg/m ²)	---	---	Cadmium	TVS	TVS
Selenium(chronic) = current conditions		E. Coli (per 100 mL)	---	630	Cadmium(T)	5.0	---
Expiration Date of 12/31/2022		Inorganic (mg/L)			Chromium III	TVS---	TVS
*Iron(T)(chronic) = 1,000(T) ug/L on Lower Sage Creek. See section 33.6(4) for iron standards and assessment locations for Sage Creek.			acute	chronic	Chromium III(T)	---50	100---
*Uranium(acute) = See 33.5(3) for details.		Ammonia	TVS	TVS	Chromium VI	TVS	TVS
*Uranium(chronic) = See 33.5(3) for details.		Boron	---	0.75	Copper	TVS	TVS
*Iron(T)(chronic) = 1,250(T) ug/L on Upper Sage Creek. Break between Upper and Lower Sage Creek is the west border of Section 18, T5N, R87W. See section 33.6(4) for iron assessment locations.		Chloride	---	---250	Iron	---	WS
		Chlorine	0.019	0.011	Iron(T)	---	varies*
		Cyanide	0.005	---	Iron(T)	---	1250±1000
		Nitrate	10010	---	Lead	TVS	TVS
	Nitrite	---0.05	0.05---	Lead(T)	50	---	
	Phosphorus	---	0.17	Manganese	TVS	TVS/WS	
	Sulfate	---	---WS	Mercury(T)	---	0.01(t)	
	Sulfide	---	0.002	Molybdenum(T)	---	160150	
				Nickel	TVS	TVS	
				Nickel(T)	---	100	
				Selenium	TVS	TVS	
				Silver	TVS	TVS	
				Uranium	---varies*	---varies*	
				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 33.6 for further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

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

13h. Mainstem of Dry Creek, (near Hayden), including all tributaries and wetlands, from above the confluence with Temple Gulch to the confluence with the Yampa River ~~near Hayden~~.

COUCYA13H	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	---
	<u>Water Supply</u>	D.O. (mg/L)	---	5.0	Arsenic(T)	---	<u>7.60.02-10</u> ^A
Qualifiers:		pH	6.5 - 9.0	---	Beryllium <u>Cadmium</u>	--- <u>TVS</u>	--- <u>TVS</u>
Other:		chlorophyll a (mg/m ²)	---	150	<u>Cadmium(T)</u>	--- <u>5.0</u>	TVS <u>---</u>
Temporary Modification(s):		E. Coli (per 100 mL)	---	126	Cadmium(T) <u>Chromium III</u>	TVS <u>---</u>	--- <u>TVS</u>
Selenium(chronic) = current conditions		Inorganic (mg/L)			<u>Chromium III(T)</u>	TVS <u>50</u>	TVS <u>---</u>
Expiration Date of 12/31/2022			acute	chronic	Chromium VI	TVS	TVS
<u>*Uranium(acute) = See 33.5(3) for details.</u>		Ammonia	TVS	TVS	Copper	TVS	TVS
<u>*Uranium(chronic) = See 33.5(3) for details.</u>		Boron	---	0.75	<u>Iron</u>	---	<u>WS</u>
		Chloride	---	--- <u>250</u>	Iron(T)	---	1000
		Chlorine	0.019	0.011	Lead	TVS	TVS
		Cyanide	0.005	---	<u>Lead(T)</u>	<u>50</u>	---
		Nitrate	400 <u>10</u>	---	Manganese	TVS	TVS <u>WS</u>
		Nitrite	--- <u>0.05</u>	0.05 <u>---</u>	Mercury(T)	---	0.01(t)
		Phosphorus	---	0.17	Molybdenum(T)	---	460 <u>150</u>
		Sulfate	---	--- <u>WS</u>	Nickel	TVS	TVS
		Sulfide	---	0.002	<u>Nickel(T)</u>	---	<u>100</u>
					Selenium	TVS	TVS
					Silver	TVS	--- <u>TVS</u>
					<u>Silver(T)</u>	---	<u>TVS</u>
					Uranium	--- <u>varies*</u>	--- <u>varies*</u>
					Zinc	TVS	TVS

13i. Mainstem of Grassy Creek, including all tributaries and wetlands, from the source to immediately above the confluence with Scotchmans Gulch.

COUCYA13I	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 N		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/m ²)	---	---	Cadmium	TVS	TVS
Iron(chronic) = current conditions*		E. Coli (per 100 mL)	---	630	Chromium III	TVS	TVS
Expiration Date of 6/30/2023		Inorganic (mg/L)			<u>Chromium III(T)</u>	---	<u>100</u>
Selenium(chronic) = current conditions			acute	chronic	Chromium VI	TVS	TVS
Expiration Date of 12/31/2022		Ammonia	TVS	TVS	Copper	TVS	TVS
<u>*Iron(T)(chronic) = See section 33.6(4) for iron assessment locations.</u>		Boron	---	0.75	Iron(T)	---	1000*
<u>*Uranium(acute) = See 33.5(3) for details.</u>		Chloride	---	---	Lead	TVS	TVS
<u>*Uranium(chronic) = See 33.5(3) for details.</u>		Chlorine	0.019	0.011	Manganese	TVS	TVS
<u>*TempMod: Iron = feapplies to Grassy Creek.</u>		Cyanide	0.005	---	Mercury(T)	---	0.01(t)
		Nitrate	100	---	Molybdenum(T)	---	460 <u>150</u>
		Nitrite	--- <u>0.05</u>	0.05 <u>---</u>	Nickel	TVS	TVS
		Phosphorus	---	0.17	Selenium	TVS	TVS
		Sulfate	---	---	Silver	TVS	TVS
		Sulfide	---	0.002	Uranium	--- <u>varies*</u>	--- <u>varies*</u>
					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 33.6 for further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

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

13j. Mainstem of Grassy Creek, (near Hayden), including all tributaries and wetlands, from above the confluence with Scotchmans Gulch to the confluence with the Yampa River near Hayden.

COUCYA13J	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT		acute	chronic	
UP	Aq Life Warm 2 Recreation N	acute	chronic				
Qualifiers:	D.O. (mg/L)	---	5.0	Aluminum	---	---	
	pH	6.5 - 9.0	---	Arsenic	340	---	
Other: Temporary Modification(s): Selenium(chronic) = current conditions Expiration Date of 12/31/2022 *Uranium(acute) = See 33.5(3) for details. *Uranium(chronic) = See 33.5(3) for details.	chlorophyll a (mg/m ²)	---	---	Arsenic(T)	---	100	
	E. Coli (per 100 mL)	---	630	Beryllium	---	---	
	Inorganic (mg/L)			Cadmium	TVS	TVS	
	acute	chronic	Chromium III	TVS	TVS		
	Ammonia	TVS	TVS	Chromium III(T)	---	100	
	Boron	---	0.75	Chromium VI	TVS	TVS	
	Chloride	---	---	Copper	TVS	TVS	
	Chlorine	0.019	0.011	Iron(T)	---	1000	
	Cyanide	0.005	---	Lead	TVS	TVS	
	Nitrate	100	---	Manganese	TVS	TVS	
	Nitrite	---0.05	0.05---	Mercury(T)	---	0.01(†)	
	Phosphorus	---	0.17	Molybdenum(T)	---	160150	
	Sulfate	---	---	Nickel	TVS	TVS	
	Sulfide	---	0.002	Selenium	3/4-6/30	TVS	TVS
				Silver	TVS	TVS	
			Uranium	---varies*	---varies*		
			Zinc	TVS	TVS		

14. Mainstem of Elkhead Creek, including all tributaries and wetlands, from the boundary of the National Forest lands, to a point immediately below the confluence with Calf Creek. Dry Fork of Elkhead Creek, including all tributaries and wetlands, from the source to a point immediately below 80A Road. (40.612676, -107.228533), which are not on National Forest lands.

COUCYA14	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT		acute	chronic	
Reviewable	Aq Life Cold 1 Recreation E Water Supply	acute	chronic				
Qualifiers:	D.O. (mg/L)	---	6.0	Aluminum	---	---	
	D.O. (spawning)	---	7.0	Arsenic	340	---	
Other: *Uranium(acute) = See 33.5(3) for details. *Uranium(chronic) = See 33.5(3) for details.	pH	6.5 - 9.0	---	Arsenic(T)	---	0.02	
	chlorophyll a (mg/m ²)	---	150	Beryllium	---	---	
	E. Coli (per 100 mL)	---	126	Cadmium	TVS(tr)	TVS	
	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	---0.05	0.05---	Lead(T)	50	---	
	Phosphorus	---	0.11	Manganese	TVS	TVS/WS	
	Sulfate	---	WS	Mercury(T)	---	0.01(†)	
	Sulfide	---	0.002	Molybdenum(T)	---	160150	
			Nickel	TVS	TVS		
			Nickel(T)	---	100		
			Selenium	TVS	TVS		
			Silver	TVS	TVS(tr)		
			Uranium	---varies*	---varies*		
			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 33.6 for further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

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

17. Deleted.						
COUCYA17	Classifications	Physical and Biological			Metals (ug/L)	
Designation		DM	MWAT	acute	chronic	
Qualifiers:		acute	chronic			
Other:		Inorganic (mg/L)				
		acute	chronic			
18. Mainstem of the South Fork Little Snake River, including all tributaries and wetlands <u>Middle Fork Little Snake River, including all tributaries and wetlands, from their confluence to the confluence with the Little Snake River, which are not on National Forest boundary to the lands.</u> North Fork Little Snake River, including all tributaries and wetlands, from the Colorado/Wyoming border, to the confluence with the Little Snake River.						
COUCYA18	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	acute	chronic	
Reviewable	Aq Life Cold 1 Recreation E Water Supply	acute	chronic			
Qualifiers:						
Other:						
		Inorganic (mg/L)				
		acute	chronic			
		Ammonia	TVS	TVS	Iron	WS
		Boron	---	0.75	Iron(T)	1000
		Chloride	---	250	Lead	TVS
		Chlorine	0.019	0.011	Lead(T)	50
		Cyanide	0.005	---	Manganese	TVS
		Nitrate	10	---	Mercury(T)	0.01(†)
		Nitrite	0.05	0.05	Molybdenum(T)	150
		Phosphorus	---	0.11	Nickel	TVS
		Sulfate	---	WS	Nickel(T)	100
		Sulfide	---	0.002	Selenium	TVS
					Silver	TVS(tr)
					Uranium	varies*
					Zinc	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 33.6 for further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

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

21. All lakes and reservoirs <u>which are tributary to the Yampa River</u> within the Mount Zirkel, Flat Tops and Sarvis Creek Wilderness Areas- <u>except for those lakes and reservoirs included in Lower Yampa River Segment 28.</u>							
COUCYA21	Classifications	Physical and Biological		Metals (ug/L)			
Designation		DM	MWAT		acute	chronic	
OW	Agriculture						
	Aq Life Cold 1	CL,CLL	CL,CLL	Aluminum	---	---	
	Recreation E	acute	chronic	Arsenic	340	---	
	Water Supply			Arsenic(T)	---	0.02	
Qualifiers:				Beryllium	---	---	
Other: *chlorophyll a (ug/L)(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area. *Phosphorus(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area. <u>*Uranium(acute) = See 33.5(3) for details.</u> <u>*Uranium(chronic) = See 33.5(3) for details.</u>	D.O. (mg/L)	---	6.0	Cadmium	TVS(tr)	TVS	
	D.O. (spawning)	---	7.0	Cadmium(T)	<u>5.0</u>	---	
	pH	6.5 - 9.0	---	Chromium III	---	TVS	
	chlorophyll a (ug/L)	---	8*	Chromium III(T)	50	---	
	E. Coli (per 100 mL)	---	126	Chromium VI	TVS	TVS	
				Inorganic (mg/L)	Copper	TVS	TVS
				acute	Iron	---	WS
				chronic	Iron(T)	---	1000
	Ammonia	TVS	TVS	Lead	TVS	TVS	
	Boron	---	0.75	Lead(T)	<u>50</u>	---	
	Chloride	---	250	Manganese	TVS	TVS/WS	
	Chlorine	0.019	0.011	Mercury(T)	---	0.01(†)	
	Cyanide	0.005	---	Molybdenum(T)	---	<u>160-150</u>	
	Nitrate	10	---	Nickel	TVS	TVS	
	Nitrite	<u>---0.05</u>	<u>0.05---</u>	Nickel(T)	---	<u>100</u>	
Phosphorus	---	0.025*	Selenium	TVS	TVS		
Sulfate	---	WS	Silver	TVS	TVS(tr)		
Sulfide	---	0.002	Uranium	<u>--varies*</u>	<u>--varies*</u>		
			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 33.6 for further details on applied standardsfor 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 2

Water Quality Control Division

Draft Proposed

Regulation #37

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

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

37.1 AUTHORITY

These regulations are promulgated pursuant to section 25-8-101 et seq. C.R.S., as amended, and in particular, 25-8-203 and 25-8-204.

37.2 PURPOSE

These regulations establish classifications and numeric standards for the Colorado River Basin, including all tributaries and standing bodies of water. This includes all or parts of Garfield, Mesa, Rio Blanco, Moffat and Routt Counties. The classifications identify the actual beneficial uses of the water. The numeric standards are assigned to determine the allowable concentrations of various parameters. Discharge permits will be issued by the Water Quality Control Division to comply with basic, narrative, and numeric standards and control regulations so that all discharges to waters of the state protect the classified uses. ~~(See Regulation No. 31, section 31.14).~~ It is intended that these and all other stream classifications and numeric standards be used in conjunction with and be an integral part of Regulation No. 31 Basic Standards and Methodologies for Surface Water.

37.3 INTRODUCTION

These regulations and tables present the classifications and numeric standards assigned to stream segments listed in the attached tables (see ~~section 37.6 Appendix 37-1~~). As additional stream segments are classified and numeric standards for designated parameters are assigned for this drainage system, they will be added to or replace the numeric standards in the tables in ~~section 37.6 Appendix 37-1~~. Any additions or revisions of classifications or numeric standards can be accomplished only after public hearing by the Commission and proper consideration of evidence and testimony as specified by the statute and the "basic regulations".

37.4 DEFINITIONS

See the Colorado Water Quality Control Act and the codified water quality regulations for definitions.

37.5 BASIC STANDARDS

(1) ~~TEMPERATURE~~ Temperature

All waters of the Colorado River Basin are subject to the following standard for temperature. (Discharges regulated by permits, which are within the permit limitations, shall not be subject to enforcement proceedings under this standard). Temperature shall maintain a normal pattern of diurnal and seasonal fluctuations with no abrupt changes and shall have no increase in temperature of a magnitude, rate, and duration deemed deleterious to the resident aquatic life. This standard shall not be interpreted or applied in a manner inconsistent with section 25-8-104, C.R.S.

(2) QUALIFIERSQualifiers

See Basic Standards and Methodologies for Surface Water for a listing of organic standards at 31.11 and metal standards found at 31.16 Table III. The column in the tables headed "Water + Fish" are presumptively applied to all aquatic life class 1 streams which also have a water supply classification, and are applied to aquatic life class 2 streams which also have a water supply classification, on a case-by-case basis as shown in ~~the Tables 37.6~~Appendix 37-1. The column in the tables at 31.11 headed "Fish Ingestion" is presumptively applied to all aquatic life class 1 streams which do not have a water supply classification, and are applied to aquatic life class 2 streams which do not have a water supply classification, on a case-by-case basis as shown in ~~Tables 37.6~~Appendix 37-1.

(3) URANIUMUranium

- (a) All waters of the Lower Colorado River Basin, are subject to the following basic standard for uranium, unless otherwise specified by a water quality standard applicable to a particular segment. However, discharges of uranium regulated by permits which are within these permit limitations shall not be a basis for enforcement proceedings under this basic standard.
- (b) Uranium level in surface waters shall be maintained at the lowest practicable level.
- (c) In no case shall uranium levels in waters assigned a water supply classification be increased by any cause attributable to municipal, industrial, or agricultural discharges so as to exceed 16.8-30 $\mu\text{g/l}$ or naturally-occurring concentrations (as determined by the State of Colorado), whichever is greater.
 - (i) The first number in the 16.8-30 $\mu\text{g/l}$ 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.

(4) NUTRIENTSNutrients

Prior to ~~May-December~~ 31, 2022 for chlorophyll a and prior to December 31, 2027 for total phosphorus, interim nutrient values will be considered for adoption only in the limited circumstances defined at 31.17(e) and (f). These circumstances include headwaters, Direct Use Water Supply (DUWS) Lakes and Reservoirs, and other special circumstances determined by the Commission. Additionally, prior to ~~May-December~~ 31, ~~2017~~2027, only total phosphorus and chlorophyll a will be considered for adoption. After ~~May-December~~ 31, ~~2017~~2027, total nitrogen will be considered for adoption per the circumstances outlined in 31.17(~~eg~~).

Prior to ~~May-December~~ 31, 2022~~7~~, nutrient criteria will be adopted for headwaters on a segment by segment basis for the Lower Colorado Basin. Moreover, pursuant to 31.17(e) nutrient standards will only be adopted for waters upstream of all permitted domestic wastewater treatment facilities discharging prior to May 31, 2012 or with preliminary effluent limits requested prior to May 31, 2012, and any non-domestic facilities subject to Regulation 85 effluent limits and discharging prior to May 31, 2012. The following is a list of all permitted domestic wastewater treatment facilities discharging prior to May 31, 2012 or with preliminary effluent limits requested prior to May 31, 2012, and any non-domestic facilities subject to Regulation 85 effluent limits and discharging prior to May 31, 2012 in the Lower Colorado Basin:

Segment	Permittee	Facility name	Permit No.
COLCLY02	Craig City of	Craig WWTF	CO0040037
COLCWH07	Whiteriver RV LLC	Whiteriver RV Sanitation WWTF	COG588048
COLCWH07	Meeker Sanitation District	Meeker Sanitation District	CO0047139
COLCWH13b	Shell Frontier Oil & Gas Inc	Corral Gulch WWTF	CO0048859
COLCWH21	Rangely Town of	Rangely WWTF	CO0000010
COLCLC01	Rifle City of	Rifle Regional WW Reclamation Facility	CO0048151
COLCLC01	Wastewater Treatment Service LLC	Waste Water Treatment Services WWTF	COG589110
COLCLC01	Silt Town of	Silt Town of	COG588046
COLCLC01	West Glenwood Springs SD	West Glenwood Springs SD	COG588008
COLCLC01	Glenwood Springs City of	Glenwood Springs Regional WWTF	CO0048852
COLCLC01	Talbott Enterprises Inc	Talbott Enterprises Inc	COG588061
COLCLC01	New Castle Town of	New Castle WWTF	COG588062
COLCLC01	Riverbend Water and Sewer Company	Riverbend Subdivision	COG588006
COLCLC02a	Colorado Retail Ventures Services LLC	Cameo Eagle Travel Center	CO0048847
COLCLC02a	DeBeque Town of	DeBeque Town of	CO0048135
COLCLC02a	Battlement Mesa Metro Dist	Battlement Mesa Metro Dist WWTF	COG589086
COLCLC02b	Clifton Sanitation District	Clifton Sanitation District	CO0033791
COLCLC02b	Palisade Town of	Palisade WWTF	CO0000012
COLCLC03	Fruita City of	Fruita Wastewater Reclamation Facility	CO0048854
COLCLC04e	Tri-State Generation & Transmission Assoc Inc	Rifle Station	CO0042447
COLCLC07a	Weiss & Associates	Canyon Creek Estates WWTF	COG588081
COLCLC13b	Mesa Co/Grand Junction City of	Persigo WWTF	CO0040053
COLCLC15a	Grand Mesa Metro Dist 2	Grand Mesa Metro Dist 2	CO0023485
COLCLC15a	Mesa WSD	Mesa WSD	CO0048143
COLCLC16 4 5e	Collbran Town of	Valleywide Sewerage System	CO0040487

Prior to ~~May-December~~ 31, 2022~~7~~:

- For segments located entirely above these facilities, nutrient standards apply to the entire segment.
- For segments with portions downstream of these facilities, *nutrient standards only apply above these facilities*. A ~~foot~~note was added to the total phosphorus and chlorophyll a standards in these segments. The ~~foot~~note references the table of qualified facilities at 37.5(4).
- For segments located entirely below these facilities, nutrient standards do not apply.

A ~~foot~~note was added to the total phosphorus and chlorophyll a standards in lakes segments as nutrients standards apply only to lakes and reservoirs larger than 25 acres surface area.

37.6 TABLES

(1) Introduction

The numeric standards for various parameters in this regulation and in the tables in Appendix 37-1 were assigned by the Commission after a careful analysis of the data presented on actual stream conditions and on actual and potential water uses.

Numeric standards are not assigned for all parameters listed in the tables attached to Regulation No. 31. If additional numeric standards are found to be needed during future periodic reviews, they can be assigned by following the proper hearing procedures.

(2) Abbreviations:

(a) The following abbreviations are used in this regulation and in the tables in Appendix 37-1:

<u>ac</u>	=	<u>acute (1-day)</u>
°C	=	degrees celsius
<u>ch</u>	=	<u>chronic (30-day)</u>
CL	=	cold lake temperature tier
CLL	=	cold large lake temperature tier
CS-I	=	cold stream temperature tier one
CS-II	=	cold stream temperature tier two
D.O.	=	dissolved oxygen
DM	=	daily maximum <u>temperature</u>
DUWS	=	direct use water supply
E. c oli	=	e <u>Escherichia coli</u>
mg/l	=	milligrams per liter
MWAT	=	maximum weekly average temperature
OW	=	outstanding waters
sc	=	sculpin
sp	=	spawning
SSE	=	site-specific equation
T	=	total recoverable
t	=	total
tr	=	trout
TVS	=	table value standard
µg /l	=	micrograms per liter
UP	=	use-protected
WAT	=	weekly average temperature
WL	=	warm lake temperature tier
WS	=	water supply
WS-I	=	warm stream temperature tier one
WS-II	=	warm stream temperature tier two
WS-III	=	warm stream temperature tier three
WS-IV	=	warm stream temperature tier four

(b) In addition, the following abbreviations were used:

Fe(ch) Iron	=	WS
Mn(ch)	=	WS
<u>Manganese</u>	=	
SO₄ Sulfate	=	WS

These abbreviations mean: For all surface waters with an actual water supply use, the less restrictive of the following two options shall apply as numerical chronic standards, as specified in the Basic Standards and Methodologies at 31.16 Table II and III:

- (i) existing quality as of January 1, 2000; or
- (ii) Iron = 300 $\mu\text{g/l}$ (dissolved)
Manganese = 50 $\mu\text{g/l}$ (dissolved)
SO₄-Sulfate = 250 mg/l

For all surface waters with a “water supply” classification that are not in actual use as a water supply, no water supply standards are applied for iron, manganese or sulfate, unless the Commission determines as the result of a site-specific rulemaking hearing that such standards are appropriate.

(c) Temporary Modification for Water + Fish Chronic Arsenic Standard

- (i) The temporary modification for chronic arsenic standards applied to segments with an arsenic standard of 0.02 $\mu\text{g/l}$ that has been set to protect the Water + Fish qualifier is listed in the temporary modification and qualifiers column as As(ch)=hybrid.
- (ii) For discharges existing on or before 6/1/2013, the temporary modification is: As(ch)=current condition, expiring on 12/31/2021.
- (iii) For new or increased discharges commencing on or after 6/1/2013, the temporary modification is: As(ch)=0.02-3.0 $\mu\text{g/l}$ (Trec), expiring on 12/31/2021.
 - (a) The first number in the range is the health-based water quality standard previously adopted by the Commission for the segment.
 - (b) The second number in the range is a technology based value established by the Commission for the purpose of this temporary modification.
 - (c) 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.

(3) Table Value Standards

In certain instances in the tables in Appendix 37-1, the designation “TVS” is used to indicate that for a particular parameter a “table value standard” has been adopted. This designation refers to numerical criteria set forth in the Basic Standards and Methodologies for Surface Water. The criteria for which the TVS are applicable are on the following table.

TABLE VALUE STANDARDS
(Concentrations in $\mu\text{g/l}$ unless noted)

PARAMETER ⁽¹⁾	TABLE VALUE STANDARDS ⁽²⁾⁽³⁾
Aluminum (Trec)	Acute = $e^{(1.3695[\ln(\text{hardness})]+1.8308)}$ pH equal to or greater than 7.0 Chronic = $e^{(1.3695[\ln(\text{hardness})]-0.1158)}$ pH less than 7.0 Chronic = $e^{(1.3695[\ln(\text{hardness})]-0.1158)}$ or 87, whichever is more stringent
Ammonia ⁽⁴⁾	Cold Water = (mg/l as N)Total $acute = \frac{0.275}{1 + 10^{7.204 - pH}} + \frac{39.0}{1 + 10^{pH - 7.204}}$ $chronic = \left(\frac{0.0577}{1 + 10^{7.688 - pH}} + \frac{2.487}{1 + 10^{pH - 7.688}} \right) * MIN(2.85, 1.45 * 10^{0.028(25 - T)})$
	Warm Water = (mg/l as N)Total $acute = \frac{0.411}{1 + 10^{7.204 - pH}} + \frac{58.4}{1 + 10^{pH - 7.204}}$
	$chronic (Apr 1 - Aug 31) = \left(\frac{0.0577}{1 + 10^{7.688 - pH}} + \frac{2.487}{1 + 10^{pH - 7.688}} \right) * MIN(2.85, 1.45 * 10^{0.028(25 - T)})$ $chronic (Sep 1 - Mar 31) = \left(\frac{0.0577}{1 + 10^{7.688 - pH}} + \frac{2.487}{1 + 10^{pH - 7.688}} \right) * 1.45 * 10^{0.028 * (25 - MAX(T, 7))}$
Cadmium	Acute = $(1.136672 - [\ln(\text{hardness}) * (0.041838)]) * e^{0.9151[\ln(\text{hardness})] - 3.1485}$ Acute(Trout) = $(1.136672 - [\ln(\text{hardness}) * (0.041838)]) * e^{0.9151[\ln(\text{hardness})] - 3.6236}$ Chronic = $(1.101672 - [\ln(\text{hardness}) * (0.041838)]) * e^{0.7998[\ln(\text{hardness})] - 4.4451}$
Chromium III ⁽⁵⁾	Acute = $e^{(0.819[\ln(\text{hardness})]+2.5736)}$ Chronic = $e^{(0.819[\ln(\text{hardness})]+0.5340)}$
Chromium VI ⁽⁵⁾	Acute = 16 Chronic = 11
Copper	Acute = $e^{(0.9422[\ln(\text{hardness})]-1.7408)}$ Chronic = $e^{(0.8545[\ln(\text{hardness})]-1.7428)}$
Lead	Acute = $(1.46203 - [\ln(\text{hardness}) * (0.145712)]) * e^{(1.273[\ln(\text{hardness})]-1.46)}$ Chronic = $(1.46203 - [\ln(\text{hardness}) * (0.145712)]) * e^{(1.273[\ln(\text{hardness})]-4.705)}$
Manganese	Acute = $e^{(0.3331[\ln(\text{hardness})]+6.4676)}$ Chronic = $e^{(0.3331[\ln(\text{hardness})]+5.8743)}$
Nickel	Acute = $e^{(0.846[\ln(\text{hardness})]+2.253)}$ Chronic = $e^{(0.846[\ln(\text{hardness})]+0.0554)}$
Selenium ⁽⁶⁾	Acute = 18.4 Chronic = 4.6
Silver	Acute = $\frac{1}{2}e^{(1.72[\ln(\text{hardness})]-6.52)}$ Chronic = $e^{(1.72[\ln(\text{hardness})]-9.06)}$ Chronic(Trout) = $e^{(1.72[\ln(\text{hardness})]-10.51)}$

Temperature	TEMPERATURE TIER	TIER CODE	SPECIES EXPECTED TO BE PRESENT	APPLICABLE MONTHS	TEMPERATURE STANDARD (°C)	
					(MWAT)	(DM)
Temperature	Cold Stream Tier I (7)	CS-I	brook trout, cutthroat trout	June – Sept.	17.0	21.7
				Oct. – May	9.0	13.0
	Cold Stream Tier II (7)	CS-II	-all other cold-water species	April – Oct.	18.3	23.9 24.3
				Nov. – March	9.0	13.0
	Cold Lake	CL	brook trout, brown trout, cutthroat trout, lake trout, rainbow trout, Arctic grayling, sockeye salmon	April – Dec.	17.0	21.2
				Jan. – March	9.0	13.0
	Cold Large Lake (>100 acres surface area)	CLL	brown trout, lake trout, rainbow trout	April – Dec.	18.3	23.8 24.2
				Jan. – March	9.0	13.0
	Warm Stream Tier I	WS-I	common shiner, Johnny darter, orangethroat darter, stonecat	March – Nov.	24.2	29.0
				Dec. – Feb.	12.1	14.5 24.6
	Warm Stream Tier II	WS-II	brook stickleback, central stoneroller, creek chub, longnose dace, Northern redbelly dace, finescale dace, razorback sucker, white sucker, mountain sucker	March – Nov.	27.5	28.6
				Dec. – Feb.	13.8	14.3 25.2
Warm Stream Tier III	WS-III	all other warm-water Species	March – Nov.	28.7	31.8	
			Dec. – Feb.	14.3	15.9 24.9	
Warm Lakes	WL	yellow perch, walleye, pumpkinseed, smallmouth bass, striped bass, white bass, largemouth bass, bluegill, spottail shiner, stonecat, n Northern pike, tiger muskellunge, black crappie, common carp, gizzard shad, sauger, white crappie, wiper	April – Dec.	26.32	29.53	
			Jan. – March	13.21	14.8 24.1	
Uranium	Acute = $e^{(1.1021[\ln(\text{hardness}))+2.7088]}$ Chronic = $e^{(1.1021[\ln(\text{hardness}))+2.2382]}$					
Zinc	Acute = $0.978 * e^{(0.9094[\ln(\text{hardness}))+0.9095]}$ Chronic = $0.986 * e^{(0.9094[\ln(\text{hardness}))+0.6235]}$ if hardness less than 102 mg/l CaCO ³ Chronic (sculpin) = $e^{(2.140[\ln(\text{hardness}))-5.084]}$					

TABLE VALUE STANDARDS - FOOTNOTES

- (1) Metals are stated as dissolved unless otherwise specified.
- (2) Hardness values to be used in equations are in mg/l as calcium carbonate and shall be no greater than 400 mg/L. The hardness values used in calculating the appropriate metal standard should be based on the lower 95 per cent confidence limit of the mean hardness value at the periodic low flow criteria as determined from a regression analysis of site-specific data. Where insufficient site-specific data exists to define the mean

hardness value at the periodic low flow criteria, representative regional data shall be used to perform the regression analysis. Where a regression analysis is not appropriate, a site-specific method should be used. In calculating a hardness value, regression analyses should not be extrapolated past the point that data exist.

- (3) Both acute and chronic numbers adopted as stream standards are levels not to be exceeded more than once every three years on the average.
- (4) For acute conditions the default assumption is that salmonids could be present in cold water segments and should be protected, and that salmonids do not need to be protected in warm water segments. For chronic conditions, the default assumptions are that early life stages could be present all year in cold water segments and should be protected. In warm water segments the default assumption is that early life stages are present and should be protected only from April 1 through August 31. These assumptions can be modified by the Commission on a site-specific basis where appropriate evidence is submitted.
- (5) Unless the stability of the chromium valence state in receiving waters can be clearly demonstrated, the standard for chromium should be in terms of chromium VI. In no case can the sum of the instream levels of Hexavalent and Trivalent Chromium exceed the water supply standard of 50 $\mu\text{g/l}$ total chromium in those waters classified for domestic water use.
- (6) Selenium is a bioaccumulative metal and subject to a range of toxicity values depending upon numerous site-specific variables.
- ~~(7) Mountain whitefish-based summer temperature criteria [16.9 (ch), 21.2 (ac)] apply when and where spawning and sensitive early life stages of this species are known to occur.~~
- ~~(7) E.coli criteria and resulting standards for individual water segments, are established as indicators of the potential presence of pathogenic organisms. Standards for E. coli are expressed as a two-month geometric mean. Site-specific or seasonal standards are also two-month geometric means unless otherwise specified.~~
- ~~(8) All phosphorus standards are based upon the concentration of total phosphorus.~~
- ~~(9) The pH standards of 6.5 (or 5.0) and 9.0 are an instantaneous minimum and maximum, respectively to be applied as effluent limits. In determining instream attainment of water quality standards for pH, appropriate averaging periods may be applied, provided that beneficial uses will be fully protected.~~

(4) Site-specific Standards, Assessment Locations, and Assessment Criteria

~~The following criteria shall be used when assessing whether a specified waterbody is in attainment of the specified standard.~~

- (a) White River Segment 13b Selenium Assessment Thresholds and Locations
 - Corral Gulch, Se(ch)=5.7 $\mu\text{g/l}$
 - Assessment location: Corral Gulch at the mouth.
 - Duck Creek, Se(ch)=7.9 $\mu\text{g/l}$
 - Assessment location: Duck Creek at the mouth.
 - Yellow Creek, Se(ch)=6.9 $\mu\text{g/l}$

Assessment location: Yellow Creek upstream from the confluence with Barcus Creek.
Greasewood Creek, Se(ch)=6.0 $\mu\text{g/l}$
Assessment location: Greasewood Creek at the mouth.

(b) White River Segment 13c Iron Assessment Threshold and Location

Yellow Creek, Fe(ch)=1625 $\mu\text{g/l}$
Assessment location: Yellow Creek at the mouth.

(c) Lower Colorado Segment 4e Iron Standards and Assessment

Unnamed tributary, Iron (chronic) = 3500 (T) $\mu\text{g/L}$, assessment location as follows:

- UT-2: Unnamed tributary, immediately downstream of the Tri-State Rifle Station discharge (39.519572, -107.729424)

Dry Creek and remaining tributaries and wetlands, Iron (chronic) = 5900 (T) $\mu\text{g/L}$, assessment location as follows:

- DC-2: Dry Creek, downstream of dry tributary channel entering from the east from the Garfield County Airport (39.523944, -107.73496)

(d) Lower Colorado River Segment 1: Temperature Standards

Lower Colorado River from the confluence with the Roaring Fork River to Elk Creek

DM = 21.2 and MWAT = 16.9 from 4/1 – 5/31

DM and MWAT = CS-II from 6/1 – 9/30

DM = 21.2 and MWAT = 16.9 from 10/1 – 10/31

DM and MWAT = CS-II from 11/1 – 3/31

All other locations DM and MWAT = CS-II

(5) Stream Classifications and Water Quality Standards Tables

The stream classifications and water quality standards tables in Appendix 37-1 are incorporated herein by reference.

The following is information regarding duration and measured form of standards in Appendix 37-1:

(a) E. coli criteria and resulting standards for individual water segments, are established as indicators of the potential presence of pathogenic organisms. Standards for E. coli are expressed as a two-month geometric mean. Site-specific or seasonal standards are also two-month geometric means unless otherwise specified.

(b) All phosphorus standards are based upon the concentration of total phosphorus.

(c) The pH standards of 6.5 (or 5.0) and 9.0 are an instantaneous minimum and maximum, respectively to be applied as effluent limits. In determining instream attainment of water quality standards for pH, appropriate averaging periods may be applied, provided that beneficial uses will be fully protected.

(d) All mercury standards apply to the total recoverable fraction of all forms, both organic and inorganic, of mercury in water.

(e) All ammonia, nitrate, and nitrite standards are based upon the concentration reported as nitrogen.

37.7 – 37.9 RESERVED

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37.40 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; JUNE 10, 2019 RULEMAKING; FINAL ACTION AUGUST 12, 2019; EFFECTIVE DATE DECEMBER 31, 2019

The provisions of C.R.S. 25-8-202(1)(a) and (b); 25-8-203; 25-8-204; and 25-8-402 C.R.S., 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

A. Water Body Segmentation

Some segments were renumbered, combined, or new segments were created to facilitate appropriate organization of water bodies in this regulation. Renumbering and/or creation of new segments was made based on information that showed: a) the original reason for segmentation no longer applied; b) significant differences in uses, water quality and/or physical characteristics warrant a change in standards on only a portion of the existing segment; and/or c) certain segments could be merged into one segment because they had similar water quality and uses. The following changes were made:

Lower Yampa segments 3a and 3d: Tributaries and wetlands to Temple Gulch and Morgan Gulch were moved from Segment 3a to Segment 3d to facilitate improved organization of the regulation. Segment 3d includes the mainstems of Temple Gulch and Morgan Gulch. As a result of this change, tributaries and wetlands to Temple Gulch and Morgan Gulch are now designated Reviewable. Water quality data from these tributaries indicate 11 of the 12 antidegradation parameters are in attainment. While data for *E. coli*, the twelfth parameter, are not available, a sanitary survey indicates there are no human sources present that are likely to impact quality in these tributaries. Therefore, the Reviewable designation is appropriate for all waters in revised Segment 3d.

Lower Yampa segments 3a and 3f: Tributaries and wetlands to Big Gulch were moved from Segment 3a to Segment 3f to facilitate improved organization of the regulation. Segment 3f includes the mainstem of Big Gulch. As a result of this change, tributaries and wetlands to Big Gulch are now designated Reviewable. Water quality data from these tributaries indicate 11 of the 12 antidegradation parameters are in attainment. While data for *E. coli*, the twelfth parameter, are not available, a sanitary survey indicates there are no human sources present that are likely to impact quality in these tributaries. Therefore, the Reviewable designation is appropriate for all waters in revised Segment 3f.

Lower Colorado segments 7a and 9d: The lower portion of Battlement Creek was moved from Segment 7a to new Segment 9d to facilitate improved organization of the regulation. Standards from Segment 7a were retained.

Lower Colorado segments 11a, 11b, 11c, 11d, 11e, 11f, 11g and 12a: Segments 11a, 11b, 11c, 11d, 11e, 11f and 12a were combined in their entirety into Segment 11a, and a portion of Segment 11g was added to Segment 11a to facilitate appropriate adoption of appropriate use

classifications and standards and organization of the regulation. The use classifications for this new Segment 11a are Agriculture, Aquatic Life Cold 1, Recreation P and Water Supply.

Lower Colorado Segment 11g: Segment 11g was renumbered to Segment 11b. Additionally, the original segment was divided into three segments to facilitate improved geographic organization of the regulation and adoption of appropriate standards. Tributaries to East Fork Parachute Creek were included in new Segment 11a. Tributaries to the Colorado included in the description were moved to new Segment 12a. Tributaries to the east side of Parachute Creek were retained in Segment 11b with no changes to the use classifications.

Lower Colorado Segment 11h: Segment 11h was moved to previously deleted Segment 11c to improve clarity of the regulation. The segment description was also reworded for clarity, but content was not altered.

Lower Colorado segments 5, 12b and 12c: Wallace Creek was moved from Segments 5 and 12b to new Segment 12c to improve clarity and facilitate adoption of the appropriate Aquatic Life use classification and standards. Segment 5 retained an Aquatic Life Cold 1 use with CS-I temperature standards, and Segment 12b retained an Aquatic Life Cold 2 use with CS-II temperature standards. New Segment 12c was assigned an Aquatic Life Cold 1 use with CS-I temperature standards.

Lower Colorado Segment 13d: Coal Canyon Creek downgradient of the Government Highline Canal was moved from Segment 13d to Segment 13a to facilitate adoption of appropriate standards to protect the Aquatic Life use. Segment 13d was deleted.

Segment descriptions were also edited to improve clarity, correct typographical errors, and correct spelling errors. These changes are listed in Section M.

B. Aquatic Life Use Classifications and Standards

Some segments assigned an Aquatic Life use classification were missing a standard to protect that use. The commission adopted the missing standards for the following segments:

[List to be completed following preliminary final action by the commission.]

The commission reviewed information regarding the existing aquatic communities. For segments where the existing aquatic communities are not aligned with the Aquatic Life use, the following segments were downgraded from Cold to Warm:

[List to be completed following preliminary final action by the commission.]

The commission reviewed all Class 2 segments that have fish that are “of a catchable size and which are normally consumed and where there is evidence that fishing takes places on a recurring basis.” Water + Fish or Fish Ingestion standards were applied to the following segments:

[List to be completed following preliminary final action by the commission.]

C. Recreation Use Classifications and Standards

The commission reviewed information regarding the current Recreation use classifications and evidence pertaining to actual or potential primary contact recreation. In addition, newly created segments were given the same Recreation use classification as the segment from which they were split, unless there was insufficient evidence to support keeping that classification, or evidence to show that the existing use classification was inappropriate.

Based upon evidence that portions of these segments are publicly accessible and located in a developed area where there is easy access for children, it was determined that primary contact recreation is expected to occur. The following segments with a Recreation P use classification and standards were upgraded to Recreation E:

[List to be completed following preliminary final action by the commission.]

Based upon evidence that portions of these segments are publicly accessible and located in a developed area where there is easy access for children, it was determined that primary contact recreation is expected to occur. The following segments with a seasonal Recreation N use classification and standards were upgraded to Recreation E:

[List to be completed following preliminary final action by the commission.]

Based upon evidence that portions of these segments are publicly accessible and/or accessible to families who live in the area or visitors to public recreation lands in these segments, it was determined that there is the potential for primary contact recreation, including water play by children. However, at this time, existing primary contact uses were not identified. Therefore, the following segments with a Recreation N use classification and standards were upgraded to Recreation P:

[List to be completed following preliminary final action by the commission.]

D. Water Supply Use Classification and Standards

The commission added a Water Supply use classification and standards where the evidence demonstrated a reasonable potential for a hydrological connection between surface water and alluvial wells used for drinking water. The Water Supply use classification and standards were added to the following segments:

[List to be completed following preliminary final action by the commission.]

E. Agriculture Use Classification and Standards

The commission reviewed the single segment lacking an Agriculture use. Based on an evaluation of the available data and information, no changes were adopted at this time.

Some segments assigned an Agriculture use classification were missing a standard to protect that use. The commission adopted the missing standards for the following segments:

[List to be completed following preliminary final action by the commission.]

F. Other Standards to Protect Agriculture, Aquatic Life, and Water Supply Uses

- 1. Molybdenum:** In 2010, the commission adopted a new standard for molybdenum to protect cattle from the effects of molybdenosis. The table value adopted at that time was 300 µg/L, but included an assumption of 48 mg/day of copper supplementation to ameliorate the effects of molybdenosis. State and local experts on cattle nutrition indicated that copper supplementation in the region is common, but is not universal. Therefore, the copper supplementation assumption was removed from the equation, which then yielded a standard of 160 µg/L. That standard was applied in recent basin reviews.

In the 2015 Regulation No. 38 hearing, the commission adopted a standard of 150 µg/L, based on an improved understanding of the dietary- and water-intake rates for various life-stages of cattle. This standard is protective of all life-stages of cattle (including lactating cows and growing heifers, steers and bulls) at all times of year.

The Agriculture table value assumes that the safe copper:molybdenum ratio is 4:1. Food and water intake is based on growing heifers, steers, and bulls consuming 6.7 kg/day of dry matter and 56.8 liters of water per day. Molybdenum supplementation is assumed to be zero. The table value standard (TVS), which considers total copper and molybdenum intakes, is calculated from the following equation:

$$\text{Mo TVS} = \frac{(\text{Cu}_{\text{forage}} \times \text{Forage}_{\text{intake}}) + (\text{Cu}_{\text{water}} \times \text{Water}_{\text{intake}}) + \text{Cu}_{\text{supp}}}{\text{Cu:Mo Safe Ratio} \times \text{Water}_{\text{intake}}} - (\text{Mo}_{\text{forage}} \times \text{Forage}_{\text{intake}})$$

The assumed values for these equations are as follows:

$\text{Cu}_{\text{forage}} = 7 \text{ mg/kg}$, $\text{Forage}_{\text{intake}} = 6.7 \text{ kg/day}$, $\text{Cu}_{\text{water}} = 0.008 \text{ mg/L}$, $\text{Water}_{\text{intake}} = 56.8 \text{ L/day}$,
 $\text{Cu}_{\text{supplementation}} = 0 \text{ mg/day}$, $\text{Cu:Mo Safe Ratio} = 4:1$, $\text{Mo}_{\text{forage}} = 0.5 \text{ mg/kg}$.

In 2010, the commission also adopted a new standard for molybdenum to protect the Water Supply use that was calculated in accordance with Policy 96-2.

A molybdenum standard of 150 $\mu\text{g/L}$ was adopted for all segments in Regulation No. 37 that have an Agriculture use classification, and where livestock or irrigated forage are present or expected to be present.

- 2. Cadmium for Aquatic Life:** The commission adopted updated hardness-based cadmium Aquatic Life standards on a targeted, site-specific basis in cold waters to reflect the most up-to-date science. The new standards, released by the U.S. Environmental Protection Agency (EPA) in March 2016, are protective of sensitive cold water aquatic life (i.e., trout). The cadmium criteria recommended by EPA and adopted by the commission are as follows:

$$\text{Acute} = e^{(0.9789 \cdot \ln(\text{hardness}) - 3.866)} \cdot (1.136672 - (\ln(\text{hardness}) \cdot 0.041838))$$

$$\text{Chronic} = e^{(0.7977 \cdot \ln(\text{hardness}) - 3.909)} \cdot (1.101672 - (\ln(\text{hardness}) \cdot 0.041838))$$

EPA's updated cadmium criteria are less stringent than Colorado's current cadmium standards when water hardness is greater than 45 mg/L CaCO_3 . Although the criteria are less stringent, they were developed using the latest science and are protective of aquatic life, and it is expected that Colorado's state-wide cadmium standards will likely be updated using the 2016 EPA cadmium criteria at a later date. Therefore, the commission determined it was appropriate to adopt the new criteria for waters known to be impaired for cadmium to ensure forthcoming clean-up goal development and Total Maximum Daily Load (TMDL) evaluations are based on the most relevant water quality standards available. The updated cadmium standards were adopted for the following segments:

[List to be completed following preliminary final action by the commission.]

- 3. Cadmium, Nickel, and Lead for Water Supply:** A review of the cadmium, nickel, and lead standards showed that uses were not always adequately protected by the standards currently in the tables. Depending on hardness, the Aquatic Life standards for cadmium, lead, and nickel were not protective of the Water Supply use. The division reviewed all segments in Regulation No. 37 to determine if the current standards applied to each segment are fully protective of the assigned uses, and revised or added standards where appropriate.

The cadmium Water Supply standard was added because the acute Aquatic Life standard is not protective when the hardness was greater than 200 mg/L in non-trout streams and 345 mg/L in trout streams; the lead Water Supply standard was added because the acute Aquatic Life

standard is not protective when hardness is greater than 79 mg/L; and the nickel Water Supply standard was added because the chronic Aquatic Life standard is not protective when hardness is greater than 216 mg/L. Cadmium, lead, and nickel Water Supply standards were added to the following segments:

[List to be completed following preliminary final action by the commission.]

- 4. Aquatic Life Criteria for Selenium, Ammonia, and Aluminum:** The commission declined to adopt EPA's revised 304(a) Aquatic Life criteria for selenium, ammonia, and aluminum at this time; however, the division is committed to evaluating these new criteria. Studies are currently underway for each parameter to improve understanding of these criteria in the context of water quality conditions in Colorado and how these criteria may be adopted and implemented in Colorado in the future.

G. Antidegradation Designations

The commission reviewed all segments designated Use Protected to determine if the Use Protected designation was still warranted. Based upon available water quality data that meet the criteria of 31.8(2)b, the Use Protected designation was removed from the following segments:

[List to be completed following preliminary final action by the commission.]

The commission reviewed all segments designated Reviewable to determine if the Reviewable designation was still warranted. Based upon available water quality data that fails to meet the criteria of 31.8(2)b, the Reviewable designation was not removed from any segments.

H. Ambient Quality-Based and Site-Specific Criteria-Based Standards

Ambient quality-based standards are adopted where a comprehensive analysis has been conducted demonstrating that elevated existing water quality levels are the result of natural conditions or are infeasible to reverse, but are adequate to protect the highest attainable use. All existing ambient-based standards were reviewed and no revisions were made.

Ambient-based standards were deleted from the following segment:

[List to be completed following preliminary final action by the commission.]

The commission reviewed all other existing site-specific standards. Based on an evaluation of the available data and information, no additional changes were adopted at this time.

I. Temporary Modifications

All existing temporary modifications were examined to determine if they should be allowed to expire or if they should be extended, either unchanged or with changes to the numeric limits.

The commission allowed to expire on 12/31/2019 temporary modifications on the following segments:

[List to be completed following preliminary final action by the commission.]

The commission deleted temporary modifications on the following segments:

[List to be completed following preliminary final action by the commission.]

To remain consistent with the commission's decisions regarding arsenic in section 37.31, all existing temporary modifications for arsenic of "As(ch)=hybrid" (expiration date of 12/31/21) were retained. In

addition, for the following segments, an arsenic temporary modification was adopted for the 0.02 µg/L Water + Fish numeric standard in recognition of the uncertainty regarding “the water quality standard necessary to protect current and/or future uses” (31.7(3)). For arsenic, a known human carcinogen, the uncertainty is multi-faceted. For example, there are unresolved questions about existing water quality conditions (including spatial and temporal variation), the sources and causes of any numeric standard exceedances, and to what extent existing conditions may be a result of natural or irreversible sources. Likewise, with reference to the equations used to calculate the Water + Fish, Water Supply, and Fish Ingestion table value standards for arsenic (Policy 96-2), there are unresolved questions about the cancer slope, the bioconcentration or bioaccumulation factor, and the percentage of total arsenic in fish tissue that is inorganic. The commission recognizes the need to resolve the uncertainty in the arsenic standards and ensure that human health is adequately protected. Temporary modifications for arsenic were added to the following segments:

[List to be completed following preliminary final action by the commission.]

J. Temperature Standards for Rivers and Streams

The commission revised temperature criteria in Regulation No. 31 in 2007, and again in 2010, based on the development of the Colorado Temperature Database and a lengthy stakeholder process. In 2014, the new temperature standards were adopted for all segments with an Aquatic Life use classification in Regulation No. 37. In June 2016, temperature criteria in Regulation No. 31 were further revised, including changes to the temperature table value standards, revision of warm water winter acute standards, and the addition of footnotes to protect lake trout and mountain whitefish.

- 1. Colorado Temperature Database Update:** The Colorado Temperature Database was updated in 2016 to reflect the most recent research regarding the thermal requirements of Colorado’s fishes, which allowed for adoption of an overall update of the cold and warm water acute and chronic temperature table value standards. In this hearing, the commission adopted revisions at 37.6(3) to bring this regulation into conformity with the revised table value standards found in Table I of Regulation No. 31.
- 2. Warm Water Winter Acute Table Values:** The 2016 updates to the temperature database also allowed for the adoption of revisions to the warm water winter acute table values. When seasonal numeric temperature standards were first adopted in 2007, warm water winter acute and chronic standards were simply set at half the summer season table values, recognizing a pattern seen in cold waters. In 2016, the acute winter table values for warm water fish were revised based on lethal temperature thresholds established in laboratory experiments for fish acclimated to “winter” temperatures. Standards derived using this new method more accurately protect warm water fish from acute thermal effects in winter. In this hearing, the commission adopted revisions at 37.6(3) to bring this regulation into conformity with the revised warm water winter acute temperature table value standards found in Table I of Regulation No. 31.
- 3. Mountain Whitefish and Lake Trout Footnotes:** In 2016, the commission adopted two footnotes to Table I of Regulation No. 31 to allow for additional thermal protection of mountain whitefish and lake trout where appropriate. These species were given special summer standards due to their thermal sensitivity and limited distributions. Lake trout occur in only a small number of lakes and reservoirs, and thermally-sensitive early life stages of mountain whitefish are known to occur only in certain cold waters during certain times of the year.

While early life stages of mountain whitefish are known to be the most thermally-sensitive, the time period these early life stages occur can vary from site to site. Mountain whitefish spawn in the fall, but timing of spawning, incubation, and emergence all depend on a variety of site-specific factors, including water temperature. The incubation period takes longer when water is colder, and that will delay hatching, emergence, and migration of fry. Depending on when spawning occurs and the water temperature in which the eggs are spawned and incubated, the incubation period could last through late spring.

Based on information provided by Colorado Parks and Wildlife (CPW), thermally-sensitive early life stages of mountain whitefish occur in certain water bodies in Regulation No. 37. Spawning begins in October and the fry life stage is complete by May in these water bodies. Therefore, only limited application of the mountain whitefish summer temperature standards to protect eggs, larvae, and fry is necessary.

In segments currently assigned CS-I temperature standards, the application of the mountain whitefish summer temperature standards is not necessary. The winter season included in CS-I temperature standards (i.e., October to May) is expected to cover the period when mountain whitefish early life stages are expected to occur (i.e., October to May). In addition, the CS-I winter standards are more stringent than the mountain whitefish summer standards. Therefore, because the CS-I temperature standards are protective of mountain whitefish early life stages, the commission did not adopt the mountain whitefish summer standards on segments with CS-I temperature standards in Regulation No. 37. While the commission made no changes to the temperature standards, mountain whitefish spawning and early life stages are known to occur in the following CS-I segments:

[List to be completed following preliminary final action by the commission.]

The commission adopted standards to protect mountain whitefish on a season- and site-specific basis where information provided by CPW biologists indicated that thermally-sensitive early life stages of mountain whitefish are known to occur. CS-II summer temperature standards typically apply from April to October. Because mountain whitefish spawning and early life stages are expected to occur from October to May, the mountain whitefish summer temperature standards were applied for the months of April, May, and October. The CS-II table value standards were retained for the remainder of the summer (i.e., June through September). Standards to protect mountain whitefish were not adopted where a site-specific temperature standard was in place. Temperature standards to protect mountain whitefish were applied to the following CS-II segments for the months of April, May, and October:

[List to be completed following preliminary final action by the commission.]

In Regulation No. 37, there are no known water bodies where lake trout are expected to occur, based upon information provided by CPW. No changes were adopted at this time to protect lake trout.

4. **Refinement of Temperature Standards:** Since temperature criteria were revised in Regulation No. 31 in 2007, the division and others have worked to ensure that appropriate temperature standards were adopted for segments throughout the state. At times, this effort to assign temperature standards has also included reevaluation of the existing Aquatic Life use classifications, and use revisions have been proposed and adopted where appropriate. Incremental progress continues as temperature standards are refined based on the experience and data gains that have occurred since initial adoption of temperature standards.

In the 2016 Regulation No. 31 hearing, the commission declined to adopt the division's proposal for statewide solutions for temperature transition zones and shoulder seasons, in favor of a basin-by-basin consideration of temperature standards on a site-specific basis. The basin-by-basin approach was selected as it allows for consideration of temperature attainability and ambient quality-based site-specific temperature standards issues in the context of multiple lines of evidence and site-specific contravening evidence. The sections below describe the considerations and methods used to develop and support the site-specific temperature standards revisions adopted in this basin hearing.

- i. Existing Uncertainty: While a great deal of progress has been made regarding the development and implementation of temperature standards, uncertainty still remains for some

- segments due to the lack of site-specific temperature or aquatic community information or conflicts between the lines of evidence. To address the uncertainty, additional data collection has been conducted where possible, and all new information collected since the last basin review was evaluated.
- ii. Attainability: Following the commission's 2016 direction to consider attainability issues using a basin-by-basin approach, the division reviewed all available information to identify segments where attainability issues may exist based upon available instream temperature data and expected in-stream summer maximum weekly average temperatures (MWATs). Expected MWATs were determined using regression analysis of temperature and elevation and the NorWeST Stream Temperature Regional Database and Model. This screening found that many segments, or portions of segments, were not expected to attain the summer or winter chronic temperature standards. These waters were targeted for additional review, as were waters listed as impaired for temperature on the 2016 303(d) List.
 - iii. Aquatic Life Use: For these selected segments, the division conducted a comprehensive, site-specific review of the existing use classification and temperature standards. Fishery data provided by CPW was evaluated to identify fish species expected to occur, whether reproduction is expected (i.e., stocked, transient, or resident species), age class structures, and any other relevant information regarding aquatic life communities. For segments where little or no information on fish species expected to occur existed, fish population data from adjacent and representative water bodies was utilized when possible.
 - iv. Thermal Drivers: In cases where temperature standards to protect the highest attainable use were determined, but the temperature standards were not attainable, site-specific factors that influence in-stream temperature were evaluated to identify any correctable anthropogenic thermal sources. All available data on temperature, hydrology, hydro-modification, canopy cover, groundwater influence, point and non-point thermal sources, and other relevant information was reviewed.

Temperature standards have been implemented and reviewed in Regulation No. 37 during three triennial reviews - 2008, 2014, 2018. The level of emphasis and effort dedicated to understanding the aquatic community and temperature standards implementation during these reviews has resulted in a great deal of progress and application of appropriate temperature standards across the basin. Accordingly, fewer site-specific temperature standards and/or corresponding Aquatic Life use revisions were necessary compared to previous basin reviews.

Based upon information regarding the species expected to occur, temperature data, physical habitat, land cover/use, groundwater inputs, flow conditions, and all other available information regarding thermal drivers, the commission adopted revisions of temperature standards for the segments listed below where water quality is not feasible to improve or where the thermal regime is the result of natural conditions, but is sufficient to protect the highest attainable use.

The following segments were changed from CS-II to CS-I:

[List to be completed following preliminary final action by the commission.]

The following segments were changed from CS-II to WS-II:

[List to be completed following preliminary final action by the commission.]

Moving forward with this site-specific approach, the commission encourages the division to consider whether any additional information would be appropriate to be included in the use attainability analyses.

K. Other/Site-Specific Revisions

[To be completed following preliminary final action by the commission.]

L. Standards Corrections and Clarifications

1. **Duration of Nitrite Standard:** The commission corrected the duration of the nitrite standard from chronic to acute on all segments. When the commission adopted the new format for tables in 2016, all nitrite standards were incorrectly included in the “chronic” standards column.
2. **Uranium:** To improve the clarity of the regulation, the commission included references to the basin-wide uranium standards at 37.5(3) in the Appendix 37-1 tables. For the acute and chronic uranium standards for all segments, the commission included a reference to 37.5(3) to clarify that the basic standard at 37.5(3) applies to all waters in Regulation No. 37. Because these standards already applied basin-wide, there is no practical effect of this change.
3. **Mercury:** To improve the clarity of the regulation, the commission added Total Recoverable notation (T) to the mercury Aquatic Life and Water Supply standards. The standards apply to the total recoverable fraction of all forms, both organic and inorganic, of mercury in water. Multiple forms of mercury exist in the environment and these forms differ dramatically in both their potential to cause toxic effects and their availability for uptake by organisms. Certain aquatic conditions can lead to the conversion to the highly bioaccumulative, toxic, organic form (methylmercury). The mercury standards are designed to provide protection from the accumulation of those toxic forms and therefore, the standards address all forms of mercury. The addition of the Total Recoverable notation does not represent a change in current Colorado policy or procedures.

M. Correction of Typographical and Other Errors and Segmentation Clarification

The following edits were made to segment descriptions to improve clarity and correct typographical errors:

- The formatting of the tables in Appendix 37-1 was modified to include only parameters that have been adopted in a majority of segments. The tables include rows for physical and biological, inorganic and metals for all parameters which the commission commonly adopts into segments. In segments where there is no numeric standard for a commonly adopted parameter, a blank row for that parameter is included to show the commission's site-specific decision not to adopt a numeric standard for that parameter. The commission removed beryllium and aluminum from all segments where no standard has been adopted, because these parameters have only been adopted on a site-specific basis, rather than basin-wide.
- An acronym list was added to the front of Appendix 37-1 to improve the clarity and usability of the tables.
- Information was added at 37.6(5) specifying that the ammonia, nitrate, and nitrate standards are to be reported as nitrogen. This is consistent with the description of the standards as they are included in Table II of Regulation No. 31.
- The segment descriptions in Appendix 37-1 were reviewed, and minor revisions were made to several segments to correct grammar, punctuation, and typos. The purpose of these changes was to improve clarity and consistency of the segment descriptions.
- Revisions were made to the sentence structure of these segments. The purpose of these changes was to improve clarity and consistency of the segment descriptions.
- Coordinates were added to several segment descriptions to facilitate location of segment boundaries.
- Lower Yampa/Green River Segment 3b: The chronic copper standard was corrected to indicate that it is measured as total.

- Lower Yampa/Green River Segment 3b: The effective date (12/31/2019) for the table value standards for several parameters was deleted from the 'Other' column. The standards will be effective on the effective date of this regulation.
- Lower Yampa/Green River Segment 13a: The segment description was modified to reflect hydrology. The modification did not change the segment boundary.
- Lower Yampa/Green River Segment 13b: The segment description was modified to reflect hydrology. The modification did not change the segment boundary.
- Lower Yampa/Green River Segment 22d: The mercury standard was reformatted to provide clarity.
- Lower Yampa/Green River Segment 28: The mercury standard was reformatted to provide clarity.
- White River Segment 4b: The segment description was modified for clarity.
- White River Segment 16a: Unnecessary exclusions were removed from the segment description.
- White River Segment 16b: Segment exclusions were modified to reflect resegmentation.
- White River Segment 20: Exclusions were updated in the segment description.
- White River Segment 25: Existing site-specific temperature standards were reformatted in the tables to provide clarity and consistency.
- Lower Colorado Segment 4a: Exclusions were modified to reflect resegmentation.
- Lower Colorado Segment 11c: The arsenic standard was corrected to indicate that it is measured as total.
- Lower Colorado Segment 16: Exclusions were updated in the segment description.
- Lower Colorado segments 15c, 15d, 16, 18 and 20: Existing site-specific temperature standards were reformatted in the tables to provide clarity and consistency.

**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 ~~06/30/2019~~12/31/2019

Abbreviations and Acronyms

<u>Aq</u>	=	<u>Aquatic</u>
<u>°C</u>	=	<u>degrees Celsius</u>
<u>CL</u>	=	<u>cold lake temperature tier</u>
<u>CLL</u>	=	<u>cold large lake temperature tier</u>
<u>CS-I</u>	=	<u>cold stream temperature tier one</u>
<u>CS-II</u>	=	<u>cold stream temperature tier two</u>
<u>D.O.</u>	=	<u>dissolved oxygen</u>
<u>DM</u>	=	<u>daily maximum temperature</u>
<u>DUWS</u>	=	<u>direct use water supply</u>
<u>E. coli</u>	=	<u><i>Escherichia coli</i></u>
<u>mg/L</u>	=	<u>milligrams per liter</u>
<u>mg/m²</u>	=	<u>milligrams per square meter</u>
<u>mL</u>	=	<u>milliliter</u>
<u>MWAT</u>	=	<u>maximum weekly average temperature</u>
<u>OW</u>	=	<u>outstanding waters</u>
<u>sc</u>	=	<u>sculpin</u>
<u>SSE</u>	=	<u>site-specific equation</u>
<u>T</u>	=	<u>total recoverable</u>
<u>t</u>	=	<u>total</u>
<u>tr</u>	=	<u>trout</u>
<u>TVS</u>	=	<u>table value standard</u>
<u>µg/L</u>	=	<u>micrograms per liter</u>
<u>UP</u>	=	<u>use-protected</u>
<u>WS</u>	=	<u>water supply</u>
<u>WS-I</u>	=	<u>warm stream temperature tier one</u>
<u>WS-II</u>	=	<u>warm stream temperature tier two</u>
<u>WS-III</u>	=	<u>warm stream temperature tier three</u>
<u>WL</u>	=	<u>warm lake temperature tier</u>

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Lower Yampa/Green River

1. Deleted.					
COLCLY01	Classifications	Physical and Biological		Metals (ug/L)	
Designation		DM	MWAT	acute	chronic
Qualifiers:		acute	chronic		
Other:		Inorganic (mg/L)			
		acute	chronic		
2. Mainstem of the Yampa River from a point immediately below the confluence with Elkhead Creek to the confluence with the Green River.					
COLCLY02	Classifications	Physical and Biological		Metals (ug/L)	
Designation	Agriculture	DM	MWAT	acute	chronic
Reviewable	Aq Life Warm 1 Recreation E Water Supply	WS-II	WS-II		
Qualifiers:		acute	chronic		
Other:		Inorganic (mg/L)			
Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2021 *Uranium(acute) = See 37.5(3) for details. *Uranium(chronic) = See 37.5(3) for details.		acute	chronic		
	Temperature °C	---	5.0	---	---
	D.O. (mg/L)	---	5.0	---	0.02
	pH	6.5 - 9.0	---	---	---
	chlorophyll a (mg/m ²)	---	---	TVS	TVS
	E. Coli (per 100 mL)	---	126	5.0	---
	Inorganic (mg/L)				
	Ammonia	TVS	TVS	---	TVS
	Boron	---	0.75	TVS	TVS
	Chloride	---	250	---	WS
	Chlorine	0.019	0.011	---	1000
	Cyanide	0.005	---	TVS	TVS
	Nitrate	10	---	50	---
	Nitrite	---0.05	0.05---	TVS	TVS/WS
	Phosphorus	---	---	---	0.01(†)
	Sulfate	---	WS	---	160150
	Sulfide	---	0.002	TVS	TVS
				---	100
				TVS	TVS
				TVS	TVS
				---	---varies*
				varies*	---varies*
				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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Yampa/Green River

3a. All tributaries to the Yampa River, including all wetlands, from a point immediately below the confluence with Elkhead Creek to a point immediately below the confluence with the Little Snake River, except for the specific listings in Segments 3b through 15, 17a, 17b and 18.

COLCLY03A	Classifications	Physical and Biological			Metals (ug/L)		
Designation		DM	MWAT		acute	chronic	
UP	Agriculture						
	Aq Life Warm 2 Recreation NP <u>Water Supply</u>	Temperature °C	WS-III	WS-III	Aluminum <u>Arsenic</u>	--- <u>340</u>	---
Qualifiers: <u>Water + Fish Standards Apply</u> Other: <u>Temporary Modification(s):</u> <u>Arsenic(chronic) = hybrid</u> <u>Expiration Date of 12/31/2021</u> <u>*Uranium(acute) = See 37.5(3) for details.</u> <u>*Uranium(chronic) = See 37.5(3) for details.</u>							
			acute	chronic	Arsenic(T)	---	<u>1000</u> <u>02</u>
		D.O. (mg/L)	---	5.0	Beryllium(tr) <u>Cadmium</u>	--- <u>TVS</u>	<u>100</u> <u>TVS</u>
		pH	6.5 - 9.0	---	Cadmium(T)	--- <u>5.0</u>	<u>40</u> <u>---</u>
		chlorophyll a (mg/m ²)	---	--- <u>150</u>	<u>Chromium III</u>	---	<u>TVS</u>
		E. Coli (per 100 mL)	---	630 <u>205</u>	Chromium III(T)	--- <u>50</u>	<u>400</u> <u>---</u>
			Inorganic (mg/L)		Chromium VI(tr)	--- <u>TVS</u>	<u>100</u> <u>TVS</u>
			acute	chronic	Copper(tr)	--- <u>TVS</u>	<u>200</u> <u>TVS</u>
		Ammonia	--- <u>TVS</u>	--- <u>TVS</u>	Iron	---	--- <u>WS</u>
		Boron	---	0.75	<u>Iron(T)</u>	---	<u>1000</u>
		Chloride	---	--- <u>250</u>	<u>Lead</u>	<u>TVS</u>	<u>TVS</u>
		Chlorine	---	---	Lead(T)	--- <u>50</u>	<u>400</u> <u>---</u>
			<u>0.019</u>	<u>0.011</u>	Manganese(tr)	--- <u>TVS</u>	<u>200</u> <u>TVS</u> <u>WS</u>
		Cyanide	<u>0.2005</u>	---	Mercury(T)	---	--- <u>0.01</u>
		Nitrate	400 <u>10</u>	---	Molybdenum(T)	---	160 <u>150</u>
	Nitrite	--- <u>0.05</u>	10 <u>---</u>	<u>Nickel</u>	<u>TVS</u>	<u>TVS</u>	
	Phosphorus	---	0.17	Nickel(T)	---	<u>200</u> <u>100</u>	
	Sulfate	---	--- <u>WS</u>	Selenium(tr)	--- <u>TVS</u>	<u>20</u> <u>TVS</u>	
	Sulfide	---	---	Silver	--- <u>TVS</u>	--- <u>TVS</u>	
			<u>0.002</u>	Uranium	--- <u>varies*</u>	--- <u>varies*</u>	
				Zinc(tr)	--- <u>TVS</u>	<u>2000</u> <u>TVS</u>	

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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Yampa/Green River

3b. Mainstem of Upper Johnson Gulch from its source to confluence with Pyeatt Gulch at CO 107. Mainstems of Pyeatt Gulch, Ute Gulch, Castor Gulch, No Name Gulch, Flume Gulch, Buzzard Gulch, Coyote Gulch, Deal Gulch, Horse Gulch (BOTH), and Elk Gulch, including all tributaries from their sources to their mouths.

COLCLY03B	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture		DM	MWAT		acute	chronic
UP	Aq Life Warm 2	Temperature °C	WS-III	WS-III	Aluminum	---	---
	Recreation P		acute	chronic	Arsenic	340	---
Qualifiers:		D.O. (mg/L)	---	5.0	Arsenic(T)	---	100
Other:		pH	6.5 - 9.0	---	Beryllium	---	---
		chlorophyll a (mg/m ²)	---	150	Beryllium(T)	---	100
		E. Coli (per 100 mL)	---	205	Cadmium	TVS [±]	TVS [±]
			Inorganic (mg/L)		Cadmium(T)	---	10
			acute	chronic	Chromium III	TVS [±]	TVS [±]
		Ammonia	TVS [±]	TVS [±]	Chromium III(T)	---	100
		Boron	---	0.754-0	Chromium VI	TVS [±]	100
		Chloride	---	---	Chromium VI	---	TVS [±]
		Chlorine	---	0.011 [±]	Copper	TVS [±]	TVS [±]
		Cyanide	0.019 [±]	---	Copper	---	200
		Cyanide	0.2	---	Iron(T)	---	1000 [±]
		Nitrate	100	---	Lead	TVS [±]	TVS [±]
		Nitrite	0.05 ⁻	10 ⁻⁻⁻	Lead(T)	---	100
		Phosphorus	---	0.17	Manganese	TVS [±]	TVS [±]
		Sulfate	---	---	Manganese(T)	---	200
		Sulfide	---	0.002 [±]	Mercury(T)	---	0.01(t) [±]
					Molybdenum(T)	---	160-150
					Nickel	TVS [±]	TVS [±]
					Nickel(T)	---	200
					Selenium	TVS [±]	TVS [±]
					Selenium(T)	---	20
					Silver	TVS [±]	TVS [±]
					Uranium	--- varies [*]	---varies [*]
					Zinc	TVS [±]	TVS [±]
					Zinc(T)	---	2000

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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Yampa/Green River

3c. Mainstem of Milk Creek, including all tributaries and wetlands, from Thornburgh (County Rd 15) to the confluence with the Yampa River, except for the specific listings in Segment 3b and 3e.

COLCLY03C	Classifications	Physical and Biological		Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute	chronic	
Reviewable	Aq Life Warm 1 Recreation P Water Supply	Temperature °C	WS-II WS-II	Aluminum	---	---
			acute chronic	Arsenic	340	---
		D.O. (mg/L)	---	5.0	Arsenic(T)	---
		pH	6.5 - 9.0	---	Beryllium	---
Qualifiers:		chlorophyll a (mg/m ²)	---	150	Cadmium	TVS TVS
Other:		E. Coli (per 100 mL)	---	205	Cadmium(T)	5.0 ---
Temporary Modification(s):		Inorganic (mg/L)		Chromium III	---	TVS
Arsenic(chronic) = hybrid			acute chronic	Chromium III(T)	50	---
Expiration Date of 12/31/2021		Ammonia	TVS	TVS	Chromium VI	TVS TVS
*Uranium(acute) = See 37.5(3) for details.		Boron	---	0.75	Copper	TVS TVS
*Uranium(chronic) = See 37.5(3) for details.		Chloride	---	250	Iron	---
		Chlorine	0.019	0.011	Iron(T)	---
		Cyanide	0.005	---	Lead	TVS TVS
		Nitrate	10	---	Lead(T)	50 ---
		Nitrite	---	0.05	Manganese	TVS TVS/WS
		Phosphorus	---	0.17	Mercury(T)	---
		Sulfate	---	WS	Molybdenum(T)	---
		Sulfide	---	0.002	Nickel	TVS TVS
					Nickel(T)	---
					Selenium	TVS TVS
					Silver	TVS TVS
					Uranium	---
					Zinc	TVS TVS

3d. Mainstem of Temple Gulch and Morgan Gulch, including tributaries and wetlands, from their sources to their confluences with the Yampa River.

COLCLY03D	Classifications	Physical and Biological		Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute	chronic	
Reviewable	Aq Life Warm 2 Recreation NP	Temperature °C	WS-II WS-II	Aluminum	---	---
			acute chronic	Arsenic	340	---
		D.O. (mg/L)	---	5.0	Arsenic(T)	---
Qualifiers:		pH	6.5 - 9.0	---	Beryllium	---
Fish Ingestion Standards Apply		chlorophyll a (mg/m ²)	---	150	Cadmium	TVS TVS
Other:		E. Coli (per 100 mL)	---	630205	Chromium III	TVS TVS
*Uranium(acute) = See 37.5(3) for details.		Inorganic (mg/L)		Chromium III(T)	---	100
*Uranium(chronic) = See 37.5(3) for details.			acute chronic	Chromium VI	TVS	TVS
		Ammonia	TVS	TVS	Copper	TVS TVS
		Boron	---	0.75	Iron(T)	---
		Chloride	---	---	Lead	TVS TVS
		Chlorine	0.019	0.011	Manganese	TVS TVS
		Cyanide	0.005	---	Mercury(T)	---
		Nitrate	100	---	Molybdenum(T)	---
		Nitrite	---	0.05	Nickel	TVS TVS
		Phosphorus	---	0.17	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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Yampa/Green River

3e. Mainstem of Good Spring Creek and its tributaries above Wilson Reservoir.						
COLCLY03E	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	acute chronic		
Reviewable	Aq Life Warm 2 Recreation P Water Supply	Temperature °C	WS-II	WS-II	Aluminum	---
Qualifiers:		acute	chronic	Arsenic	340	---
Other:		D.O. (mg/L)	---	5.0	Arsenic(T)	---
<p><u>*Uranium(acute) = See 37.5(3) for details.</u></p> <p><u>*Uranium(chronic) = See 37.5(3) for details.</u></p>		pH	6.5 - 9.0	---	Beryllium	---
		chlorophyll a (mg/m ²)	---	150	Cadmium	TVS
<p><u>*Uranium(acute) = See 37.5(3) for details.</u></p> <p><u>*Uranium(chronic) = See 37.5(3) for details.</u></p>		E. Coli (per 100 mL)	---	205	Cadmium(T)	5.0
		Inorganic (mg/L)			Chromium III	---
<p><u>*Uranium(acute) = See 37.5(3) for details.</u></p> <p><u>*Uranium(chronic) = See 37.5(3) for details.</u></p>		acute	chronic	Chromium III(T)	50	---
		Ammonia	TVS	TVS	Chromium VI	TVS
<p><u>*Uranium(acute) = See 37.5(3) for details.</u></p> <p><u>*Uranium(chronic) = See 37.5(3) for details.</u></p>		Boron	---	0.75	Copper	TVS
		Chloride	---	250	Iron	---
<p><u>*Uranium(acute) = See 37.5(3) for details.</u></p> <p><u>*Uranium(chronic) = See 37.5(3) for details.</u></p>		Chlorine	0.019	0.011	Iron(T)	---
		Cyanide	0.005	---	Lead	TVS
<p><u>*Uranium(acute) = See 37.5(3) for details.</u></p> <p><u>*Uranium(chronic) = See 37.5(3) for details.</u></p>		Nitrate	10	---	Lead(T)	50
		Nitrite	---	0.05	Manganese	TVS
<p><u>*Uranium(acute) = See 37.5(3) for details.</u></p> <p><u>*Uranium(chronic) = See 37.5(3) for details.</u></p>		Phosphorus	---	0.17	Mercury(T)	---
		Sulfate	---	WS	Molybdenum(T)	---
<p><u>*Uranium(acute) = See 37.5(3) for details.</u></p> <p><u>*Uranium(chronic) = See 37.5(3) for details.</u></p>		Sulfide	---	0.002	Nickel	TVS
		Sulfide	---	0.002	Nickel(T)	---
<p><u>*Uranium(acute) = See 37.5(3) for details.</u></p> <p><u>*Uranium(chronic) = See 37.5(3) for details.</u></p>		Sulfide	---	0.002	Selenium	TVS
		Sulfide	---	0.002	Silver	TVS
<p><u>*Uranium(acute) = See 37.5(3) for details.</u></p> <p><u>*Uranium(chronic) = See 37.5(3) for details.</u></p>		Sulfide	---	0.002	Uranium	---
		Sulfide	---	0.002	Zinc	TVS

3f. Big Gulch, including tributaries and wetlands.						
COLCLY03F	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	acute chronic		
Reviewable	Aq Life Warm 2 Recreation E	Temperature °C	WS-II	WS-II	Aluminum	---
Qualifiers:		acute	chronic	Arsenic(T)	---	100
Other:		D.O. (mg/L)	---	5.0	Beryllium(T)	---
<p><u>*Uranium(acute) = See 37.5(3) for details.</u></p> <p><u>*Uranium(chronic) = See 37.5(3) for details.</u></p>		pH	6.5 - 9.0	---	Cadmium(T)	---
		chlorophyll a (mg/m ²)	---	150	Chromium III	TVS
<p><u>*Uranium(acute) = See 37.5(3) for details.</u></p> <p><u>*Uranium(chronic) = See 37.5(3) for details.</u></p>		E. Coli (per 100 mL)	---	126	Chromium III(T)	---
		Inorganic (mg/L)			Chromium VI(T)	---
<p><u>*Uranium(acute) = See 37.5(3) for details.</u></p> <p><u>*Uranium(chronic) = See 37.5(3) for details.</u></p>		acute	chronic	Copper(T)	---	100
		Ammonia	---	0.75	Iron(T)	---
<p><u>*Uranium(acute) = See 37.5(3) for details.</u></p> <p><u>*Uranium(chronic) = See 37.5(3) for details.</u></p>		Boron	---	0.75	Lead(T)	---
		Chloride	---	---	Manganese(T)	---
<p><u>*Uranium(acute) = See 37.5(3) for details.</u></p> <p><u>*Uranium(chronic) = See 37.5(3) for details.</u></p>		Chlorine	0.019	0.011	Mercury(T)	---
		Cyanide	0.2005	---	Molybdenum(T)	---
<p><u>*Uranium(acute) = See 37.5(3) for details.</u></p> <p><u>*Uranium(chronic) = See 37.5(3) for details.</u></p>		Nitrate	100	---	Nickel(T)	---
		Nitrite	---	0.05	Selenium(T)	---
<p><u>*Uranium(acute) = See 37.5(3) for details.</u></p> <p><u>*Uranium(chronic) = See 37.5(3) for details.</u></p>		Phosphorus	---	0.17	Silver	---
		Sulfate	---	---	Uranium	---
<p><u>*Uranium(acute) = See 37.5(3) for details.</u></p> <p><u>*Uranium(chronic) = See 37.5(3) for details.</u></p>		Sulfide	---	0.002	Zinc(T)	---
		Sulfide	---	0.002	Zinc(T)	---

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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Lower Yampa/Green River

3g. Mainstems of Ben Morgan Creek, Boxelder Gulch, Collom Gulch, Hale Gulch and Jubb Creek, including all tributaries from their sources to their mouths.							
COLCLY03G	Classifications	Physical and Biological		Metals (ug/L)			
Designation	Agriculture	DM	MWAT		acute	chronic	
Reviewable	Aq Life Warm 2 Recreation P	Temperature °C	WS-III	WS-III	Aluminum Arsenic	--340	---
			acute	chronic	Arsenic(T)	---	100
Qualifiers:		D.O. (mg/L)	---	5.0	Beryllium (T)	---	400
Other:		pH	6.5 - 9.0	---	Cadmium	TVS	TVS
		chlorophyll a (mg/m ²)	---	150	Cadmium (T)	---	40
		E. Coli (per 100 mL)	---	205	Chromium III	TVS	TVS
			Inorganic (mg/L)		Chromium III(T)	---	100
			acute	chronic	Chromium VI (T)	---	400
		Ammonia	--TVS-	--TVS-	Chromium VI	TVS	TVS
		Boron	---	0.75	Copper	TVS	TVS
		Chloride	---	---	Copper (T)	---	200
		Chlorine	---	---	Iron(T)	---	--1000
			0.019	0.011	Lead	TVS	TVS
		Cyanide	0.005	---	Lead(T)	---	400
		Cyanide	0.2	---	Manganese	TVS	TVS
		Nitrate	100	---	Manganese (T)	---	200
		Nitrite	--0.05	40---	Mercury(T)	---	--0.01
		Phosphorus	---	0.17	Molybdenum(T)	---	460150
		Sulfate	---	---	Nickel	TVS	TVS
		Sulfide	---	0.002	Nickel (T)	---	200
					Selenium	TVS	TVS
					Selenium (T)	---	20
					Silver	--TVS	--TVS
					Uranium	--varies*	--varies*
					Zinc	TVS	TVS
					Zinc (T)	---	2000

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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Yampa/Green River

3h. Lay Creek from the source to the confluence with the Yampa River.						
COLCLY03H	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 NP		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/m ²)	---	150	Cadmium	TVS
		E. Coli (per 100 mL)	---	630 205	Cadmium(T)	5.0
			Inorganic (mg/L)		Chromium III	---
			acute	chronic	Chromium III(T)	50
		Ammonia	TVS	TVS	Chromium VI	TVS
		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	0.05	0.05	Manganese	TVS
		Phosphorus	---	0.17	Mercury(T)	---
		Sulfate	---	WS	Molybdenum(T)	---
		Sulfide	---	0.002	Nickel	TVS
					Nickel(T)	---
					Selenium	TVS
					Silver	TVS
					Uranium	---
						varies*
						---varies*
					Zinc	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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Yampa/Green River

3i. Lower Johnson Gulch from the confluence with Pyeatt Gulch at CO 107 to the confluence with the Yampa River.							
COLCLY03I	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT				
Reviewable	Aq Life Warm 2 Recreation P	Temperature °C	WS-III	WS-III	acute	chronic	
Qualifiers:		acute	chronic	Arsenic	---	---	
Other:		D.O. (mg/L)	---	5.0	Arsenic(T)	---	
		pH	6.5 - 9.0	---	Beryllium	---	
		chlorophyll a (mg/m ²)	---	150	Cadmium	TVS	
		E. Coli (per 100 mL)	---	205	Chromium III	TVS	
		Inorganic (mg/L)			Chromium III(T)	---	100
		acute	chronic	Chromium VI	TVS	TVS	
		Ammonia	TVS	TVS	Copper	TVS	
		Boron	---	4.0 0.75	Iron(T)	---	1000
		Chloride	---	---	Lead	TVS	TVS
		Chlorine	---	0.011	Manganese	TVS	TVS
		Cyanide	0.005	---	Mercury(T)	---	0.01(†)
		Nitrate	100	---	Molybdenum(T)	---	160 150
		Nitrite	0.05	10 ---	Nickel	TVS	TVS
		Phosphorus	---	0.17	Selenium	TVS	TVS
		Sulfate	---	---	Silver	TVS	TVS
		Sulfide	---	0.002	Uranium	---	varies*
					Zinc	TVS	TVS
4. North and South Fork of Fortification Creek, including all wetlands and tributaries, from their sources to their confluence. Little Cottonwood Creek, including all tributaries and wetlands from the source to the confluence with Fortification Creek.							
COLCLY04	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT				
Reviewable	Aq Life Cold 1 Recreation P Water Supply	Temperature °C	CS-I	CS-I	acute	chronic	
Qualifiers:		acute	chronic	Arsenic	---	---	
Other:		D.O. (mg/L)	---	6.0	Arsenic(T)	---	
		D.O. (spawning)	---	7.0	Beryllium	---	
		pH	6.5 - 9.0	---	Cadmium	TVS(tr)	
		chlorophyll a (mg/m ²)	---	150	Cadmium(T)	5.0	
		E. Coli (per 100 mL)	---	205	Chromium III	---	
		Inorganic (mg/L)			Chromium III(T)	50	---
		acute	chronic	Chromium VI	TVS	TVS	
		Ammonia	TVS	TVS	Copper	TVS	
		Boron	---	0.75	Iron	---	
		Chloride	---	250	Iron(T)	---	
		Chlorine	0.019	0.011	Lead	TVS	
		Cyanide	0.005	---	Lead(T)	50	
		Nitrate	10	---	Manganese	TVS	
		Nitrite	0.05	0.05 ---	Mercury(T)	---	
		Phosphorus	---	0.11	Molybdenum(T)	---	
		Sulfate	---	WS	Nickel	TVS	
		Sulfide	---	0.002	Nickel(T)	---	
					Selenium	TVS	
					Silver	TVS	
					Uranium	---	
					Zinc	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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Yampa/Green River

5. Mainstem of Fortification Creek from the confluence of the North Fork and South Fork to the confluence with the Yampa River.							
COLCLY05	Classifications	Physical and Biological			Metals (ug/L)		
Designation		DM	MWAT		acute	chronic	
Reviewable	Agriculture						
	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)	---	0.02
Qualifiers:		pH	6.5 - 9.0	---	Beryllium	---	---
Other:		chlorophyll a (mg/m ²)	---	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	---
<u>*Uranium(acute) = See 37.5(3) for details.</u>		Ammonia	TVS	TVS	Chromium VI	TVS	TVS
<u>*Uranium(chronic) = See 37.5(3) for details.</u>		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	---0.05	0.05---	Manganese	TVS	TVS/WS
		Phosphorus	---	0.17	Mercury(T)	---	0.01(†)
		Sulfate	---	WS	Molybdenum(T)	---	160 150
		Sulfide	---	0.002	Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	---	---varies*
						varies*	
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Yampa/Green River

6. All tributaries to Fortification Creek, including all wetlands, from the confluence of the North and South Forks to the confluence with the Yampa River, except for ~~the specific~~-listings in Segments 4 and 7.

COLCLY06	Classifications	Physical and Biological		Metals (ug/L)			
Designation	Agriculture	DM	MWAT	acute	chronic		
Reviewable	Aq Life Warm 2	Temperature °C	WS-III	WS-III	Aluminum	---	---
	Recreation P		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/m ²)	---	150	Cadmium	TVS	TVS
*Uranium(acute) = See 37.5(3) for details.		E. Coli (per 100 mL)	---	205	Cadmium(T)	5.0	---
*Uranium(chronic) = See 37.5(3) for details.		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	---0.05	0.05---	Manganese	TVS	TVS/WS
		Phosphorus	---	0.17	Mercury(T)	---	0.01(†)
		Sulfate	---	WS	Molybdenum(T)	---	160150
		Sulfide	---	0.05	Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	---	---varies*
						varies*	
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Yampa/Green River

7. Mainstem of Little Bear Creek, including all tributaries and wetlands, from the source to the confluence with Dry Fork.							
COLCLY07	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT		acute	chronic	
Reviewable	Aq Life Cold 1 Recreation P	acute	chronic				
Qualifiers:							
Other:							
		Temperature °C	CS-II	CS-II	Aluminum	---	
					Arsenic	340	
		D.O. (mg/L)	---	6.0	Arsenic(T)	---	
		D.O. (spawning)	---	7.0	Beryllium	---	
		pH	6.5 - 9.0	---	Cadmium	TVS(tr)	
		chlorophyll a (mg/m ²)	---	150	Chromium III	TVS	
		E. Coli (per 100 mL)	---	205	Chromium III(T)	---	
					Chromium VI	TVS	
		Inorganic (mg/L)				Copper	TVS
		acute	chronic			Iron(T)	---
		Ammonia	TVS	TVS	Lead	TVS	
		Boron	---	0.75	Manganese	TVS	
		Chloride	---	---	Mercury(T)	---	
		Chlorine	0.019	0.011	Molybdenum(T)	---	
		Cyanide	0.005	---	Nickel	TVS	
		Nitrate	100	---	Selenium	TVS	
		Nitrite	---0.05	0.05---	Silver	TVS	
		Phosphorus	---	0.11	Uranium	---	
		Sulfate	---	---		varies*	
		Sulfide	---	0.002	Zinc	TVS	
						TVS/TVS(sc)	

8. Mainstem of the East Fork of the Williams Fork River, including all tributaries and wetlands which are within the boundaries of the Flat Tops Wilderness Area.							
COLCLY08	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT		acute	chronic	
OW	Aq Life Cold 1 Recreation E Water Supply	acute	chronic				
Qualifiers:							
Other:							
		Temperature °C	CS-I	CS-I	Aluminum	---	
					Arsenic	340	
		D.O. (mg/L)	---	6.0	Arsenic(T)	---	
		D.O. (spawning)	---	7.0	Beryllium	---	
		pH	6.5 - 9.0	---	Cadmium	TVS(tr)	
		chlorophyll a (mg/m ²)	---	150	Cadmium(T)	5.0	
		E. Coli (per 100 mL)	---	126	Chromium III	---	
					Chromium III(T)	50	
		Inorganic (mg/L)				Chromium VI	TVS
		acute	chronic			Copper	TVS
		Ammonia	TVS	TVS	Iron	---	
		Boron	---	0.75	Iron(T)	---	
		Chloride	---	250	Lead	TVS	
		Chlorine	0.019	0.011	Lead(T)	50	
		Cyanide	0.005	---	Manganese	TVS	
		Nitrate	10	---	Mercury(T)	---	
		Nitrite	---0.05	0.05---	Molybdenum(T)	---	
		Phosphorus	---	0.11	Nickel	TVS	
		Sulfate	---	WS	Nickel(T)	---	
		Sulfide	---	0.002	Selenium	TVS	
					Silver	TVS	
					Uranium	---	
						varies*	
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Lower Yampa/Green River

9. Mainstems of the East and South Forks of the Williams Fork River, including all wetlands and tributaries, which are within the boundary of Routt National Forest, except for the specific listings in Segment 8 and 12c.

COLCLY09	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute	chronic		
Reviewable	Aq Life Cold 1	Temperature °C	CS-I	CS-I	Aluminium	---	---
	Recreation P		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/m ²)	---	150	Cadmium(T)	5.0	---
Arsenic(chronic) = hybrid		E. Coli (per 100 mL)	---	205	Chromium III	---	TVS
Expiration Date of 12/31/2021					Chromium III(T)	50	---
					Chromium VI	TVS	TVS
					Copper	TVS	TVS
					Iron	---	WS
					Iron(T)	---	1000
					Lead	TVS	TVS
					Lead(T)	50	---
					Manganese	TVS	TVS/WS
					Mercury(T)	---	0.01(t)
					Molybdenum(T)	---	460 150
					Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	---	---varies*
						varies*	
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Yampa/Green River

10. Mainstem of the East Fork of the Williams Fork River including all tributaries and wetlands, from the boundary of Routt National Forest to the confluence with the South Fork of the Williams Fork River.						
COLCLY10	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	acute	chronic	
Reviewable	Aq Life Cold 1 Recreation E Water Supply	acute	chronic			
		Temperature °C	CS-I	CS-I	Aluminum	---
		D.O. (mg/L)	---	6.0	Arsenic	340
		D.O. (spawning)	---	7.0	Arsenic(T)	---
		pH	6.5 - 9.0	---	Beryllium	---
		chlorophyll a (mg/m ²)	---	150	Cadmium	TVS(tr)
		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0
					Chromium III	---
					Chromium III(T)	50
					Chromium VI	TVS
					Copper	TVS
					Iron	---
					Iron(T)	---
					Lead	TVS
					Lead(T)	50
					Manganese	TVS
					Mercury(T)	---
					Molybdenum(T)	---
					Nickel	TVS
					Nickel(T)	---
					Selenium	TVS
					Silver	TVS
					Uranium	---
					Zinc	TVS
						TVS/TVS(sc)

Qualifiers:

Other:

Temporary Modification(s):
Arsenic(chronic) = hybrid
Expiration Date of 12/31/2021

*Uranium(acute) = See 37.5(3) for details.
*Uranium(chronic) = See 37.5(3) for details.

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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Yampa/Green River

11. Deleted.

COLCLY11	Classifications	Physical and Biological		Metals (ug/L)	
Designation		DM	MWAT	acute	chronic
Qualifiers:		acute	chronic		
Other:		Inorganic (mg/L)			
		acute	chronic		

12a. Mainstem of the South Fork of the Williams Fork River and Beaver Creek, including all tributaries and wetlands, from the boundary of Routt National Forest to their mouths; Milk Creek, including all tributaries and wetlands, from ~~the~~ source to a point just below the confluence with Clear Creek. Morapos Creek, including all wetlands and tributaries, from the source to the confluence with the Williams Fork River.

COLCLY12A	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 P		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/m ²)	---	150	Cadmium(T)	5.0	---
Arsenic(chronic) = hybrid		E. Coli (per 100 mL)	---	205	Chromium III	---	TVS
Expiration Date of 12/31/2021		Inorganic (mg/L)		Chromium III(T)	50	---	
		acute	chronic	Chromium VI	TVS	TVS	
*Uranium(acute) = See 37.5(3) for details.		Ammonia	TVS	TVS	Copper	TVS	TVS
*Uranium(chronic) = See 37.5(3) for details.		Boron	---	0.75	Iron	---	WS
		Chloride	---	250	Iron(T)	---	1000
		Chlorine	0.019	0.011	Lead	TVS	TVS
		Cyanide	0.005	---	Lead(T)	50	---
		Nitrate	10	---	Manganese	TVS	TVS/WS
		Nitrite	---0.05	0.05---	Mercury(T)	---	0.01(†)
		Phosphorus	---	0.11	Molybdenum(T)	---	160150
		Sulfate	---	WS	Nickel	TVS	TVS
		Sulfide	---	0.002	Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	---	---varies*
						varies*	
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Yampa/Green River

12b. Milk Creek, including all tributaries and wetlands, from a point just below the confluence with Clear Creek to Thornburgh (County Rd 15).								
COLCLY12B	Classifications	Physical and Biological			Metals (ug/L)			
Designation	Agriculture	DM	MWAT		acute	chronic		
Reviewable	Aq Life Cold 1	Temperature °C	CS-II	CS-II	Aluminum	---	---	
	Recreation P		acute	chronic	Arsenic	340	---	
Qualifiers:		D.O. (mg/L)	---	6.0	Arsenic(T)	---	0-027.6	
Other: Temporary Modification(s): *Uranium(acute) = See 37.5(3) for details. Arsenic*Uranium(chronic) = hybridSee 37.5(3) for details. Expiration Date of 12/31/2021		D.O. (spawning)	---	7.0	Beryllium	---	---	
		pH	6.5 - 9.0	---		Cadmium	TVS(tr)	TVS
		chlorophyll a (mg/m ²)	---	150	Chromium III	TVS	TVS	
		E. Coli (per 100 mL)	---	205	Chromium III(T)	---	100	
		Inorganic (mg/L)			Chromium VI	TVS	TVS	
			acute	chronic	Copper	TVS	TVS	
		Ammonia	TVS	TVS	Iron(T)	---	1000	
		Boron	---	0.75	Lead	TVS	TVS	
		Chloride	---	250	Manganese	TVS	TVS	
		Chlorine	0.019	0.011	Mercury(T)	---	0.01(†)	
		Cyanide	0.005	---	Molybdenum(T)	---	460150	
		Nitrate	10	---	Nickel	TVS	TVS	
		Nitrite	---0.05	0.05---	Selenium	TVS	TVS	
		Phosphorus	---	0.11	Silver	TVS	TVS(tr)	
		Sulfate	---	---	Uranium	---	varies*	
Sulfide	---	0.002	Zinc	TVS	TVS			
12c. Mainstem of Beaver Creek, including all wetlands and tributaries, which are within the Routt National Forest.								
COLCLY12C	Classifications	Physical and Biological			Metals (ug/L)			
Designation	Agriculture	DM	MWAT		acute	chronic		
OW	Aq Life Cold 1	Temperature °C	CS-I	CS-I	Aluminum	---	---	
	Recreation P		acute	chronic	Arsenic	340	---	
Qualifiers:	Water Supply	D.O. (mg/L)	---	6.0	Arsenic(T)	---	0.02	
		D.O. (spawning)	---	7.0	Beryllium	---	---	
Other: Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2021 *Uranium(acute) = See 37.5(3) for details. *Uranium(chronic) = See 37.5(3) for details.		pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS	
		chlorophyll a (mg/m ²)	---	150	Cadmium(T)	5.0	---	
		E. Coli (per 100 mL)	---	205	Chromium III	---	TVS	
		Inorganic (mg/L)			Chromium III(T)	50	---	
			acute	chronic	Chromium VI	TVS	TVS	
		Ammonia	TVS	TVS	Copper	TVS	TVS	
		Boron	---	0.75	Iron	---	WS	
		Chloride	---	250	Iron(T)	---	1000	
		Chlorine	0.019	0.011	Lead	TVS	TVS	
		Cyanide	0.005	---	Lead(T)	50	---	
		Nitrate	10	---	Manganese	TVS	TVS/WS	
		Nitrite	---0.05	0.05---	Mercury(T)	---	0.01(†)	
		Phosphorus	---	0.11	Molybdenum(T)	---	460150	
		Sulfate	---	WS	Nickel	TVS	TVS	
		Sulfide	---	0.002	Nickel(T)	---	100	
			Selenium	TVS	TVS			
			Silver	TVS	TVS(tr)			
			Uranium	---	varies*			
			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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Yampa/Green River

13a. Mainstem of the Williams Fork River from the confluence of the East Fork and South Fork to ~~the Highway 13/789 bridge at Hamilton~~ immediately below the confluence with ~~Morapos Creek~~.

COLCLY13A	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute	chronic		
Reviewable	Aq Life Cold 2	Temperature °C	CS-II	CS-II	Aluminum	---	---
	Recreation E		acute	chronic	Arsenic	340	---
	Water Supply	D.O. (mg/L)	---	6.0	Arsenic(T)	---	0.02-10 ^A
Qualifiers:		D.O. (spawning)	---	7.0	Beryllium	---	---
Other:		pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS
		chlorophyll a (mg/m ²)	---	150	Cadmium(T)	5.0	---
		E. Coli (per 100 mL)	---	126	Chromium III	---	TVS
					Chromium III(T)	50	---
					Chromium VI	TVS	TVS
					Copper	TVS	TVS
					Iron	---	WS
					Iron(T)	---	1000
					Lead	TVS	TVS
					Lead(T)	50	---
					Manganese	TVS	TVS/WS
					Mercury(T)	---	0.01(†)
					Molybdenum(T)	---	160 150
					Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	---	---varies*
						varies*	
					Zinc	TVS	TVS

*Uranium(acute) = See 37.5(3) for details.
 *Uranium(chronic) = See 37.5(3) for details.

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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Yampa/Green River

13b. Mainstem of the Williams Fork River from the highway 13/789 bridge at Hamilton below the confluence of Morapos Creek to the confluence with the Yampa River.							
COLCLY13B	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/m ²)	---	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	---0.05	0.05---	Manganese	TVS	TVS/WS
		Phosphorus	---	0.17	Mercury(T)	---	0.01(±)
		Sulfate	---	WS	Molybdenum(T)	---	160150
		Sulfide	---	0.002	Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	---	---varies*
						varies*	
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Lower Yampa/Green River

14. Deleted.						
COLCLY14	Classifications	Physical and Biological			Metals (ug/L)	
Designation		DM	MWAT		acute	chronic
Qualifiers:		acute	chronic			
Other:		Inorganic (mg/L)				
		acute	chronic			
15. Those portions of the Little Snake River which are in Colorado, from its first crossing of the Colorado/Wyoming border to a point immediately above the confluence with Powder Wash (Moffatt County).						
COLCLY15	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT		acute	chronic
Reviewable	Aq Life Cold 1 Recreation E Water Supply	acute	chronic			
Qualifiers:						
Other:	Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2021 <u>*Uranium(acute) = See 37.5(3) for details.</u> <u>*Uranium(chronic) = See 37.5(3) for details.</u>					
		Inorganic (mg/L)				
		acute	chronic			
	Temperature °C	CS-II	CS-II	Aluminium	---	---
	D.O. (mg/L)	---	6.0	Arsenic	340	---
	D.O. (spawning)	---	7.0	Arsenic(T)	---	0.02
	pH	6.5 - 9.0	---	Beryllium	---	---
	chlorophyll a (mg/m ²)	---	150	Cadmium	TVS(tr)	TVS
	E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0	---
				Chromium III	---	TVS
				Chromium III(T)	50	---
				Chromium VI	TVS	TVS
				Copper	TVS	TVS
	Ammonia	TVS	TVS	Iron	---	WS
	Boron	---	0.75	Iron(T)	---	1000
	Chloride	---	250	Lead	TVS	TVS
	Chlorine	0.019	0.011	Lead(T)	50	---
	Cyanide	0.005	---	Manganese	TVS	TVS/WS
	Nitrate	10	---	Mercury(T)	---	0.01(t)
	Nitrite	---0.05	0.05---	Molybdenum(T)	---	460150
	Phosphorus	---	0.11	Nickel	TVS	TVS
	Sulfate	---	WS	Nickel(T)	---	100
	Sulfide	---	0.002	Selenium	TVS	TVS
				Silver	TVS	TVS(tr)
				Uranium	--- varies*	---varies*
				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 37.6 for further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Lower Yampa/Green River

16. Mainstem of the Little Snake River from a point immediately above the confluence with Powder Wash to the confluence with the Yampa River.						
COLCLY16	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT			
Reviewable	Aq Life Warm 2 Recreation E Water Supply	acute	chronic	acute	chronic	
Qualifiers: <u>Water + Fish Standards Apply</u> Other: <u>Temporary Modification(s):</u> <u>Arsenic(chronic) = hybrid</u> <u>Expiration Date of 12/31/2021</u> <u>*Uranium(acute) = See 37.5(3) for details.</u> <u>*Uranium(chronic) = See 37.5(3) for details.</u>	Temperature °C	WS-III	WS-III	Aluminum	---	---
	D.O. (mg/L)	---	5.0	Arsenic	340	---
	pH	6.5 - 9.0	---	Arsenic(T)	---	0.02-10 ^A
	chlorophyll a (mg/m ²)	---	150	Beryllium	---	---
	E. Coli (per 100 mL)	---	126	Cadmium	TVS	TVS
	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)	---	4400
	Nitrate	10	---	Lead	TVS	TVS
	Nitrite	---0.05	0.05---	Lead(T)	50	---
	Phosphorus	---	0.17	Manganese	TVS	TVS/WS
	Sulfate	---	WS	Mercury(T)	---	0.01(†)
	Sulfide	---	0.002	Molybdenum(T)	---	160150
				Nickel	TVS	TVS
				Nickel(T)	---	100
				Selenium	TVS	TVS
			Silver	TVS	TVS	
			Uranium	---	---varies*	
			Zinc	TVS	TVS	

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 listings in Segment 18.

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 listings in Segment 18.						
COLCLY17A	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT			
Reviewable	Aq Life Cold 1 Recreation P	acute	chronic	acute	chronic	
Qualifiers: Other: <u>*Uranium(acute) = See 37.5(3) for details.</u> <u>*Uranium(chronic) = See 37.5(3) for details.</u>	Temperature °C	CS-II	CS-II	Aluminum	---	---
	D.O. (mg/L)	---	6.0	Arsenic	340	---
	D.O. (spawning)	---	7.0	Arsenic(T)	---	7.6
	pH	6.5 - 9.0	---	Beryllium	---	---
	chlorophyll a (mg/m ²)	---	150	Cadmium	TVS(tr)	TVS
	E. Coli (per 100 mL)	---	205	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(T)	---	0.01(†)
	Nitrate	100	---	Molybdenum(T)	---	160150
	Nitrite	---0.05	0.05---	Nickel	TVS	TVS
	Phosphorus	---	0.11	Nickel(T)	TVS	TVS
	Sulfate	---	---	Selenium	TVS	TVS
	Sulfide	---	0.002	Silver	TVS	TVS(tr)
				Uranium	---	---varies*
				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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Yampa/Green River

17b. All tributaries to the Little Snake River from a point immediately below the confluence with Fourmile Creek to the confluence with the Yampa River, except for the specific-listing in Segment 17c.

COLCLY17B	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute		chronic	
UP	Aq Life Warm 2	Temperature °C	WS-III	WS-III	Aluminum Arsenic	--- 340	---
	Recreation NP <u>Water Supply</u>		acute	chronic	Arsenic(T)	---	1000,02-10 ^A
Qualifiers:		D.O. (mg/L)	---	5.0	Beryllium(T)	---	100
Other:		pH	6.5 - 9.0	---	Cadmium	<u>TVS</u>	<u>TVS</u>
*Uranium(acute) = See 37.5(3) for details. *Uranium(chronic) = See 37.5(3) for details.		chlorophyll a (mg/m ²)	---	--- 150	Cadmium(T)	--- 5.0	10---
		E. Coli (per 100 mL)	---	630 205	Chromium III	---	<u>TVS</u>
		Inorganic (mg/L)			Chromium III(T)	--- 50	100---
		acute	chronic	chronic	Chromium VI(T)	--- TVS	100TVS
		Ammonia	--- TVS	--- TVS	Copper(T)	--- TVS	200TVS
		Boron	---	0.75	Iron	---	--- WS
		Chloride	---	--- 250	Iron(T)	---	1000
		Chlorine	---	---	Lead	<u>TVS</u>	<u>TVS</u>
			0.019	0.011	Lead(T)	--- 50	100---
		Cyanide	0.2005	---	Manganese(T)	--- TVS	200TVSWS
		Nitrate	10010	---	Mercury(T)	---	--- 0.01
		Nitrite	--- 0.05	10---	Molybdenum(T)	---	---
		Phosphorus	---	0.17	Nickel	<u>TVS</u>	<u>TVS</u>
		Sulfate	---	--- WS	Nickel(T)	---	200100
		Sulfide	---	0.05002	Selenium(T)	--- TVS	20TVS
					Silver	--- TVS	--- TVS
					Uranium	--- varies*	--- varies*
					Zinc(T)	--- TVS	2000TVS

17c. Scandinavian Gulch from the source to the confluence with the Little Snake River.

COLCLY17C	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute		chronic	
Reviewable	Aq Life Warm 2	Temperature °C	WS-III	WS-III	Aluminum	---	---
	Recreation NP		acute	chronic	Arsenic	340	---
Qualifiers:		D.O. (mg/L)	---	5.0	Arsenic(T)	---	0.02-10 ^A
Other:		pH	6.5 - 9.0	---	Beryllium	---	---
*Uranium(acute) = See 37.5(3) for details. *Uranium(chronic) = See 37.5(3) for details.		chlorophyll a (mg/m ²)	---	--- 150	Cadmium	TVS	TVS
		E. Coli (per 100 mL)	---	630 205	Chromium III	TVS	TVS
		Inorganic (mg/L)			Chromium III(T)	---	100
		acute	chronic	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(T)	---	0.01(T)
		Nitrate	100	---	Molybdenum(T)	---	160 150
		Nitrite	--- 0.05	10---	Nickel	TVS	TVS
		Phosphorus	---	0.17	Selenium	TVS	TVS
		Sulfate	---	---	Silver	TVS	TVS
		Sulfide	---	0.05	Uranium	--- varies*	--- varies*
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Yampa/Green River

18. Mainstem of Slater Creek, including all tributaries and wetlands, from the source to a point just below the confluence with Second Creek. The mainstems of Fourmile and Willow Creeks, including all tributaries and wetlands, from their sources to the boundary of the Routt National Forest.

COLCLY18	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute	chronic		
Reviewable	Aq Life Cold 1	Temperature °C	CS-I	CS-I	Aluminium	---	---
	Recreation P		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/m ²)	---	150	Cadmium(T)	5.0	---
Arsenic(chronic) = hybrid		E. Coli (per 100 mL)	---	205	Chromium III	---	TVS
Expiration Date of 12/31/2021					Chromium III(T)	50	---
					Chromium VI	TVS	TVS
					Copper	TVS	TVS
					Iron	---	WS
					Iron(T)	---	1000
					Lead	TVS	TVS
					Lead(T)	50	---
					Manganese	TVS	TVS/WS
					Mercury(T)	---	0.01(†)
					Molybdenum(T)	---	160150
					Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	---	---varies*
					Zinc	TVS	TVS/TVS(sc)
						varies*	

19a. Mainstem of the Green River within Colorado (Moffat County) from its entry at the Utah/Colorado border to a point just above the confluence with the Yampa River.

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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Lower Yampa/Green River

COLCLY19A	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture		DM	MWAT		acute	chronic
Reviewable	Aq Life Cold 1	Temperature °C	CS-II	CS-II	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
		chlorophyll a (mg/m ²)	---	150	Cadmium(T)	5.0	---
	*Uranium(acute) = See 37.5(3) for details.	E. Coli (per 100 mL)	---	126	Chromium III	---	TVS
	*Uranium(chronic) = See 37.5(3) for details.				Chromium III(T)	50	---
					Chromium VI	TVS	TVS
					Copper	TVS	TVS
					Iron	---	WS
					Iron(T)	---	1000
					Lead	TVS	TVS
					Lead(T)	50	---
					Manganese	TVS	TVS/WS
					Mercury(T)	---	0.01(†)
					Molybdenum(T)	---	160 150
					Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	---	---varies*
						varies*	---
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Yampa/Green River

19b. Mainstem of the Green River within Colorado (Moffat County) from a point just above the confluence with the Yampa River to its exit at the Utah/Colorado border.						
COLCLY19B	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT			
Reviewable	Aq Life Warm 1 Recreation E Water Supply	acute	chronic	acute	chronic	
Qualifiers:		Temperature °C	WS-II	WS-II	Aluminum	---
		D.O. (mg/L)	---	5.0	Arsenic	340
Other:		pH	6.5 - 9.0	---	Arsenic(T)	---
		chlorophyll a (mg/m ²)	---	150	Beryllium	---
*Uranium(acute) = See 37.5(3) for details. *Uranium(chronic) = See 37.5(3) for details.		E. Coli (per 100 mL)	---	126	Cadmium	TVS
		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
		Chloride	---	250	Copper	TVS
		Chlorine	0.019	0.011	Iron	---
		Cyanide	0.005	---	Iron(T)	---
		Nitrate	10	---	Lead	TVS
		Nitrite	---0.05	0.05---	Lead(T)	50
		Phosphorus	---	0.17	Manganese	TVS
		Sulfate	---	WS	Mercury(T)	---
		Sulfide	---	0.002	Molybdenum(T)	---
					Nickel	TVS
					Nickel(T)	---
					Selenium	TVS
					Silver	TVS
					Uranium	---
					Zinc	TVS

20. All tributaries to the Green River in Colorado, including all wetlands, except for the specific listings in Segments 21 and 22a - 22d. All tributaries to the Yampa River from a point immediately below the confluence with the Little Snake River to the confluence with the Green River, except for the specific listings in segments 15 through 18.						
COLCLY20	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT			
Reviewable	Aq Life Cold 2 Recreation E	acute	chronic	acute	chronic	
Qualifiers:		Temperature °C	CS-II	CS-II	Aluminum	---
		D.O. (mg/L)	---	6.0	Arsenic	340
Other:		D.O. (spawning)	---	7.0	Arsenic(T)	---
		pH	6.5 - 9.0	---	Beryllium(T)	---
*Uranium(acute) = See 37.5(3) for details. *Uranium(chronic) = See 37.5(3) for details.		chlorophyll a (mg/m ²)	---	150	Cadmium	TVS
		E. Coli (per 100 mL)	---	126	Cadmium(T)	---
		Inorganic (mg/L)			Chromium	TVS
		acute	chronic	Chromium III(T)	---	100
		Ammonia	---TVS	---TVS	Chromium VI(T)	---
		Boron	---	0.75	Copper	---
		Chloride	---	---	Copper(T)	---
		Chlorine	0.019	0.011	Iron	---
		Cyanide	0.2005	---	Iron(T)	---
		Nitrate	100	---	Lead	---
		Nitrite	---0.05	10---	Lead(T)	---
		Phosphorus	---	0.11	Manganese	---
		Sulfate	---	---	Mercury	---
		Sulfide	---	0.05002	Molybdenum	---
					Nickel	---
					Selenium	---
					Silver	---
					Uranium	---
					Zinc	---

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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Yampa/Green River

21. Mainstem of Beaver Creek, including all tributaries and wetlands, from the source to the confluence with the Green River within Colorado.							
COLCLY21	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute chronic			
Reviewable	Aq Life Cold 1 Recreation NP Water Supply	CS-I	CS-I	Aluminum	---	---	
Qualifiers:		acute	chronic	Arsenic	340	---	
Other:		D.O. (mg/L)	---	6.0	Arsenic(T)	---	
<p>*Uranium(acute) = See 37.5(3) for details.</p> <p>*Uranium(chronic) = See 37.5(3) for details.</p>		D.O. (spawning)	---	7.0	Beryllium	---	
		pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS
		chlorophyll a (mg/m ²)	---	--150	Cadmium(T)	5.0	---
		E. Coli (per 100 mL)	---	630205	Chromium III	---	TVS
		Inorganic (mg/L)			Chromium III(T)	50	---
		acute	chronic	Chromium VI	TVS	TVS	
		Ammonia	TVS	TVS	Copper	TVS	TVS
		Boron	---	0.75	Iron	---	WS
		Chloride	---	250	Iron(T)	---	1000
		Chlorine	0.019	0.011	Lead	TVS	TVS
		Cyanide	0.005	---	Lead(T)	50	---
		Nitrate	10	---	Manganese	TVS	TVS/WS
		Nitrite	--0.05	0.05---	Mercury(T)	---	0.01(†)
		Phosphorus	---	0.11	Molybdenum(T)	---	160150
		Sulfate	---	WS	Nickel	TVS	TVS
Sulfide	---	0.002	Nickel(T)	---	100		
Selenium	TVS	TVS	Silver	TVS	TVS(tr)		
Silver	TVS	TVS(tr)	Uranium	---	--varies*		
Zinc	TVS	TVS	varies*	--varies*	---		
22a. Mainstem of Vermillion Creek, including all tributaries and wetlands, from the Colorado/Wyoming border to a point just below the confluence with Talamantes Creek.							
COLCLY22A	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute chronic			
Reviewable	Aq Life Cold 1 Recreation NP	CS-I	CS-I	Aluminum	---	---	
Qualifiers:		acute	chronic	Arsenic	340	---	
Other:		D.O. (mg/L)	---	6.0	Arsenic(T)	---	
<p>*Uranium(acute) = See 37.5(3) for details.</p> <p>*Uranium(chronic) = See 37.5(3) for details.</p>		D.O. (spawning)	---	7.0	Beryllium	---	
		pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS
		chlorophyll a (mg/m ²)	---	--150	Chromium III	TVS	TVS
		E. Coli (per 100 mL)	---	630205	Chromium III(T)	---	100
		Inorganic (mg/L)			Chromium VI	TVS	TVS
		acute	chronic	Copper	TVS	TVS	
		Ammonia	TVS	TVS	Iron(T)	---	1000
		Boron	---	0.75	Lead	TVS	TVS
		Chloride	---	---	Manganese	TVS	TVS
		Chlorine	0.019	0.011	Mercury(T)	---	0.01(†)
		Cyanide	0.005	---	Molybdenum(T)	---	160150
		Nitrate	100	---	Nickel	TVS	TVS
		Nitrite	--0.05	0.05---	Selenium	TVS	TVS
		Phosphorus	---	0.11	Silver	TVS	TVS(tr)
		Sulfate	---	---	Uranium	---	--varies*
Sulfide	---	0.002	varies*	--varies*	---		
Zinc	TVS	TVS	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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Yampa/Green River

22d. Conway Draw		Physical and Biological		Metals (ug/L)		
COLCLY22D	Classifications	DM	MWAT	acute	chronic	
Designation	Agriculture					
	Reviewable	Aq Life Cold 2	CS-II	CS-II	Aluminum	---
Qualifiers:	Recreation E	acute	chronic	Arsenic	---340	---
	Water Supply			Arsenic(T)	---	0.02-10 ^A
Other:	D.O. (mg/L)	---	6.0	Beryllium(T)Cadmium	-TVS(tr)	4-0TVS
	D.O. (spawning)	---	7.0	Cadmium(T)	5.0	---
*Uranium(acute) = See 37.5(3) for details.	pH	6.5 - 9.0	---	Chromium III	---	TVS
	chlorophyll a (mg/m ²)	---	150	Chromium III(T)	50	---
*Uranium(chronic) = See 37.5(3) for details.	E. Coli (per 100 mL)	---	126	Chromium VI(T)	50TVS	---TVS
				Copper(T)	---TVS	200TVS
		Inorganic (mg/L)		Iron	---	WS
		acute	chronic	Iron(T)	---	1000
		Ammonia	---	Lead	TVS	TVS
		Boron	---	Lead(T)	50	---
		Chloride	---	Manganese	---TVS	TVS/WS
		Chlorine	---	ManganeseMercury(T)	---	2000_01
		Cyanide	0.019	Mercury	2.0(t)	---
		Nitrate	10	Mercury	---	---
		Nitrite	---0.05	Molybdenum(T)	---	160150
		Phosphorus	---	Nickel	TVS	TVS
		Sulfate	---	Nickel(T)	---	100
		Sulfide	---	Selenium(T)	---TVS	20TVS
			0.05002	Silver	---TVS	---TVS(tr)
				Uranium	---	---varies*
				Zinc(T)	---TVS	2000TVS

23. All lakes and reservoirs tributary to the Yampa River, from a point just below the confluence with Elkhead Creek to a point just below the confluence with the Little Snake River except for the specific listings in segments 24-32. This segment includes Martin Cull Reservoir, and OVO Reservoir.		Physical and Biological		Metals (ug/L)		
COLCLY23	Classifications	DM	MWAT	acute	chronic	
Designation	Agriculture					
	Reviewable	Aq Life Warm 1	WL	WL	Aluminum	---
Qualifiers:	Recreation U	acute	chronic	Arsenic	340	---
		D.O. (mg/L)	---	5.0	Arsenic(T)	---
Other:	pH	6.5 - 9.0	---	Beryllium	---	---
	chlorophyll a (ug/L)	---	20*	Cadmium	TVS	TVS
*chlorophyll a (ug/L)(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area.	E. Coli (per 100 mL)	---	126	Chromium III	TVS	TVS
				Chromium III(T)	---	100
*Phosphorus(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area.	Inorganic (mg/L)			Chromium VI	TVS	TVS
	Ammonia	TVS	TVS	Copper	TVS	TVS
*Uranium(acute) = See 37.5(3) for details.	Boron	---	0.75	Iron(T)	---	1000
	Chloride	---	---	Lead	TVS	TVS
*Uranium(chronic) = See 37.5(3) for details.	Chlorine	0.019	0.011	Manganese	TVS	TVS
	Cyanide	0.005	---	Mercury(T)	---	0.01(t)
	Nitrate	100	---	Molybdenum(T)	---	160150
	Nitrite	---0.05	0.05---	Nickel	TVS	TVS
	Phosphorus	---	0.083*	Selenium	TVS	TVS
	Sulfate	---	---	Silver	TVS	TVS
	Sulfide	---	0.002	Uranium	---	---varies*
				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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Yampa/Green River

26. All lakes and reservoirs tributary to Fortification Creek, including Ralph White Lake, except for specific listings in segments 24 and 25.

COLCLY26	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture		DM	MWAT		acute	chronic
Reviewable	Aq Life Warm 1 Recreation U	Temperature °C	WL	WL	Aluminum	---	---
Qualifiers:			acute	chronic	Arsenic	340	---
Other:		D.O. (mg/L)	---	5.0	Arsenic(T)	---	7.6
*chlorophyll a (ug/L)(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area. *Phosphorus(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area. <u>*Uranium(acute) = See 37.5(3) for details.</u> <u>*Uranium(chronic) = See 37.5(3) for details.</u>		pH	6.5 - 9.0	---	Beryllium	---	---
		chlorophyll a (ug/L)	---	20*	Cadmium	TVS(tr)	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(T)	---	0.01(†)
		Nitrate	100	---	Molybdenum(T)	---	160 150
		Nitrite	0.05	0.05	Nickel	TVS	TVS
		Phosphorus	---	0.083*	Selenium	TVS	TVS
		Sulfate	---	---	Silver	TVS	TVS(tr)
		Sulfide	---	0.002	Uranium	---	varies*
					Zinc	TVS	TVS

27. All lakes and reservoirs tributary to Milk Creek from Thornburgh (County Rd 15) to the confluence with the Yampa River, including Wilson Reservoir.

COLCLY27	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture		DM	MWAT		acute	chronic
Reviewable	Aq Life Warm 1 Recreation U Water Supply	Temperature °C	WL	WL	Aluminum	---	---
Qualifiers:			acute	chronic	Arsenic	340	---
Other:		D.O. (mg/L)	---	5.0	Arsenic(T)	---	0.02
*chlorophyll a (ug/L)(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area. *Phosphorus(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area. <u>*Uranium(acute) = See 37.5(3) for details.</u> <u>*Uranium(chronic) = See 37.5(3) for details.</u>		pH	6.5 - 9.0	---	Beryllium	---	---
		chlorophyll a (ug/L)	---	20*	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	0.05	0.05	Manganese	TVS	TVS/WS
		Phosphorus	---	0.083*	Mercury(T)	---	0.01(†)
		Sulfate	---	WS	Molybdenum(T)	---	160 150
		Sulfide	---	0.002	Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
				Silver	TVS	TVS	
				Uranium	---	varies*	
				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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Yampa/Green River

28. All lakes and reservoirs tributary to the East Fork of the Williams Fork River, within the boundaries of the Flat Tops Wilderness Area.						
COLCLY28	Classifications	Physical and Biological			Metals (ug/L)	
Designation		DM	MWAT		acute	chronic
OW	Agriculture					
	Aq Life Cold 1	CL	CL	Aluminum	---	---
	Recreation E	acute	chronic	Arsenic	340	---
Water Supply	D.O. (mg/L)	---	6.0	Arsenic(T)	---	0.02
	D.O. (spawning)	---	7.0	Beryllium	---	---
Qualifiers: Other: *chlorophyll a (ug/L)(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area. *Phosphorus(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area. <u>*Uranium(acute) = See 37.5(3) for details.</u> <u>*Uranium(chronic) = See 37.5(3) for details.</u>	pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS
	chlorophyll a (ug/L)	---	8*	Cadmium(T)	5.0	---
	E. Coli (per 100 mL)	---	126	Chromium III	---	TVS
	Inorganic (mg/L)			Chromium III(T)	50	---
		acute	chronic	Chromium VI	TVS	TVS
	Ammonia	TVS	TVS	Copper	TVS	TVS
	Boron	---	0.75	Iron	---	WS
	Chloride	---	250	Iron(T)	---	1000
	Chlorine	0.019	0.011	Lead	TVS	TVS
	Cyanide	0.005	---	Lead(T)	50	---
	Nitrate	10	---	Manganese	TVS	TVS/WS
	Nitrite	---0.05	0.05---	Mercury(T)	---	-0.01(†)
	Phosphorus	---	0.025*	Molybdenum(T)	---	160 150
Sulfate	---	WS	Nickel	TVS	TVS	
Sulfide	---	0.002	Nickel(T)	---	100	
			Selenium	TVS	TVS	
			Silver	TVS	TVS(tr)	
			Uranium	---	---varies*	
			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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Yampa/Green River

29. All lakes and reservoirs tributary to the East and South Forks of the Williams Fork River, and lakes and reservoirs tributary to the mainstem of the Williams Fork River, from the source to the Highway 13/789 bridge at Hamilton, except for ~~the specific~~ listings in segment 28.

COLCLY29	Classifications	Physical and Biological		Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute		chronic
Reviewable	Aq Life Cold 1 Recreation E Water Supply	CL	CL	Aluminum	---	---
Qualifiers:		acute	chronic	Arsenic	340	---
Other:		D.O. (mg/L)	---	6.0	Arsenic(T)	---
		D.O. (spawning)	---	7.0	Beryllium	---
		pH	6.5 - 9.0	---	Cadmium	TVS(tr)
		chlorophyll a (ug/L)	---	8*	Cadmium(T)	5.0
		E. Coli (per 100 mL)	---	126	Chromium III	---
		Inorganic (mg/L)		Chromium III(T)	50	---
		acute	chronic	Chromium VI	TVS	TVS
		Ammonia	TVS	TVS	Copper	TVS
		Boron	---	0.75	Iron	---
		Chloride	---	250	Iron(T)	---
		Chlorine	0.019	0.011	Lead	TVS
		Cyanide	0.005	---	Lead(T)	50
		Nitrate	10	---	Manganese	TVS
		Nitrite	---	0.025*	Mercury(T)	---
		Phosphorus	---	0.05	Molybdenum(T)	---
		Sulfate	---	WS	Nickel	TVS
		Sulfide	---	0.002	Nickel(T)	---
					Selenium	TVS
					Silver	TVS
					Uranium	---
					Zinc	TVS

*chlorophyll a (ug/L)(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area.
 *Phosphorus(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area.
*Uranium(acute) = See 37.5(3) for details.
*Uranium(chronic) = See 37.5(3) for details.

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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Yampa/Green River

30. All lakes and reservoirs tributary to Milk Creek from the source to Thornburgh (County Rd 15). All lakes and reservoirs tributary to Morapos Creek from the source to the confluence with the Williams Fork River.

COLCLY30	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute	chronic		
Reviewable	Aq Life Cold 1 Recreation U	CL	CL	Aluminum	---	---	
		acute	chronic	Arsenic	340	---	
Qualifiers:		D.O. (mg/L)	---	6.0	Arsenic(T)	---	7.6
Other:		D.O. (spawning)	---	7.0	Beryllium	---	---
		pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS
		chlorophyll a (ug/L)	---	8*	Chromium III	TVS	TVS
		E. Coli (per 100 mL)	---	126	Chromium III(T)	---	100
		Inorganic (mg/L)			Chromium VI	TVS	TVS
		acute	chronic	Copper	TVS	TVS	
		Ammonia	TVS	TVS	Iron(T)	---	1000
		Boron	---	0.75	Lead	TVS	TVS
		Chloride	---	---	Manganese	TVS	TVS
		Chlorine	0.019	0.011	Mercury(T)	---	0.01(†)
		Cyanide	0.005	---	Molybdenum(T)	---	460 150
		Nitrate	100	---	Nickel	TVS	TVS
		Nitrite	0.05	0.05	Selenium	TVS	TVS
		Phosphorus	---	0.025*	Silver	TVS	TVS(tr)
		Sulfate	---	---	Uranium	varies*	varies*
		Sulfide	---	0.002	Zinc	TVS	TVS

31. All lakes and reservoirs tributary to Slater Creek, from the source to a point just below the confluence with Second Creek, including Slater Creek Lake. All lakes and reservoirs tributary to Fourmile and Willow Creeks from their sources to the boundary of the Routt National Forest.

COLCLY31	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute	chronic		
Reviewable	Aq Life Cold 1 Recreation U Water Supply	CL	CL	Aluminum	---	---	
		acute	chronic	Arsenic	340	---	
Qualifiers:		D.O. (mg/L)	---	6.0	Arsenic(T)	---	0.02
Other:		D.O. (spawning)	---	7.0	Beryllium	---	---
		pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS
		chlorophyll a (ug/L)	---	8*	Cadmium(T)	5.0	---
		E. Coli (per 100 mL)	---	126	Chromium III	---	TVS
		Inorganic (mg/L)			Chromium III(T)	50	---
		acute	chronic	Chromium VI	TVS	TVS	
		Ammonia	TVS	TVS	Copper	TVS	TVS
		Boron	---	0.75	Iron	---	WS
		Chloride	---	250	Iron(T)	---	1000
		Chlorine	0.019	0.011	Lead	TVS	TVS
		Cyanide	0.005	---	Lead(T)	50	---
		Nitrate	10	---	Manganese	TVS	TVS/WS
		Nitrite	0.05	0.05	Mercury(T)	---	0.01(†)
		Phosphorus	---	0.025*	Molybdenum(T)	---	460 150
		Sulfate	---	WS	Nickel	TVS	TVS
		Sulfide	---	0.002	Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	varies*	varies*
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS White River

1. All tributaries to the White River, including all wetlands, which are within the boundaries of the Flat Tops Wilderness Area.					
COLCWH01	Classifications	Physical and Biological		Metals (ug/L)	
Designation		DM	MWAT	acute	chronic
OW	Agriculture				
	Aq Life Cold 1	CS-I	CS-I	Aluminum	---
	Recreation E	acute	chronic	Arsenic	340
	Water Supply			Arsenic(T)	---
Qualifiers:				D.O. (mg/L)	---
Other:				D.O. (spawning)	---
*Uranium(acute) = See 37.5(3) for details.		6.5 - 9.0	---	Beryllium	---
*Uranium(chronic) = See 37.5(3) for details.				Cadmium	TVS(tr)
				chlorophyll a (mg/m ²)	---
				E. Coli (per 100 mL)	---
		Inorganic (mg/L)		Cadmium(T)	5.0
		acute	chronic	Chromium III	---
				Chromium III(T)	50
				Chromium VI	TVS
				Copper	TVS
				Iron	---
				Iron(T)	---
				Lead	TVS
				Lead(T)	50
				Manganese	TVS
				Mercury(T)	---
				Molybdenum(T)	---
				Nickel	TVS
				Nickel(T)	---
				Selenium	TVS
				Silver	TVS
				Uranium	---
				Zinc	TVS
				Ammonia	TVS
				Boron	---
				Chloride	---
				Chlorine	0.019
				Cyanide	0.005
				Nitrate	10
				Nitrite	---
				Phosphorus	---
				Sulfate	---
				Sulfide	---
				Uranium	varies*
				Zinc	TVS

2. Deleted.					
COLCWH02	Classifications	Physical and Biological		Metals (ug/L)	
Designation		DM	MWAT	acute	chronic
Qualifiers:		acute	chronic		
Other:					
		Inorganic (mg/L)			
		acute	chronic		

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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS White River

4a. All tributaries to the North Fork of the White River, including all wetlands, from the Flat Tops Wilderness Area boundary to the confluence with the South Fork of the White River, except for the specific listings in Segment 1 and 4b.

COLCWH04A Classifications		Physical and Biological			Metals (ug/L)		
Designation		DM	MWAT		acute	chronic	
Reviewable	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)	---	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/m ²)	---	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(acute) = See 37.5(3) for details.		Inorganic (mg/L)			Chromium VI	TVS	TVS
*Uranium(chronic) = See 37.5(3) for details.			acute	chronic	Copper	TVS	TVS
		Ammonia	TVS	TVS	Iron	---	WS
		Boron	---	0.75	Iron(T)	---	1000
		Chloride	---	250	Lead	TVS	TVS
		Chlorine	0.019	0.011	Lead(T)	50	---
		Cyanide	0.005	---	Manganese	TVS	TVSWS
		Nitrate	10	---	Mercury(T)	---	0.01(†)
		Nitrite	---0.05	0.05---	Molybdenum(T)	---	160150
		Phosphorus	---	0.11	Nickel	TVS	TVS
		Sulfate	---	WS	Nickel(T)	---	100
		Sulfide	---	0.002	Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	---	---varies*
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS White River

4b. ~~Mainstems of Lost Creek and, including tributaries and wetlands, from the source to the confluence with the North Fork White River.~~ Snell Creek, including all wetlands and tributaries, from the ~~Flat Tops Wilderness area~~ source to the ~~boundary of confluence with the North Fork White River National Forest.~~

COLCWH04B Classifications		Physical and Biological		Metals (ug/L)			
Designation		DM	MWAT		acute	chronic	
OW	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)	---	0.02
Qualifiers:	D.O. (spawning)	---	7.0	Beryllium	---	---	
Other: Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2021 <u>*Uranium(acute) = See 37.5(3) for details.</u> <u>*Uranium(chronic) = See 37.5(3) for details.</u>	pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS	
	chlorophyll a (mg/m ²)	---	150	Cadmium(T)	5.0	---	
	E. Coli (per 100 mL)	---	126	Chromium III	---	TVS	
				Chromium III(T)	50	---	
				Chromium VI	TVS	TVS	
				Copper	TVS	TVS	
				Iron	---	WS	
				Iron(T)	---	1000	
				Lead	TVS	TVS	
				Lead(T)	50	---	
				Manganese	TVS	TVS/WS	
				Mercury(T)	---	0.01(t)	
				Molybdenum(T)	---	460/150	
				Nickel	TVS	TVS	
				Nickel(T)	---	100	
			Selenium	TVS	TVS		
			Silver	TVS	TVS(tr)		
			Uranium	---	varies*	---varies*	
			Zinc	TVS	TVS		

5. Deleted.

COLCWH05 Classifications		Physical and Biological		Metals (ug/L)		
Designation		DM	MWAT		acute	chronic
Qualifiers:		acute	chronic			
Other:						

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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS White River

8. All tributaries to the White River, including all wetlands, from the confluence of the North and South Forks to a point immediately above the confluence with Piceance Creek, which are within the boundaries of White River National Forest.

COLCWH08	Classifications	Physical and Biological			Metals (ug/L)		
Designation			DM	MWAT		acute	chronic
Reviewable	Agriculture						
	Aq Life Cold 1	Temperature °C	CS-I	CS-I	Aluminum	---	---
	Recreation P		acute	chronic	Arsenic	340	---
	Water Supply	D.O. (mg/L)	---	6.0	Arsenic(T)	---	0.02
Qualifiers:		D.O. (spawning)	---	7.0	Beryllium	---	---
Other: *Uranium(acute) = See 37.5(3) for details. *Uranium(chronic) = See 37.5(3) for details.		pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS
		chlorophyll a (mg/m ²)	---	150	Cadmium(T)	5.0	---
		E. Coli (per 100 mL)	---	205	Chromium III	---	TVS
					Chromium III(T)	50	---
					Chromium VI	TVS	TVS
					Copper	TVS	TVS
					Iron	---	WS
					Iron(T)	---	1000
					Lead	TVS	TVS
					Lead(T)	50	---
					Manganese	TVS	TVS/WS
					Mercury(T)	---	0.01(†)
					Molybdenum(T)	---	160/150
					Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	---	varies*
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS White River

9a. All tributaries to the White River, including all wetlands, from the confluence of the North and South Forks to a point immediately above the confluence with Flag Creek, which are not within the boundary of National Forest lands, except for the specific listings in Segments 9c, 9d and 10b.

COLCWH09A	Classifications	Physical and Biological			Metals (ug/L)		
		DM	MWAT		acute	chronic	
Designation	Agriculture						
	Aq Life Cold 2	Temperature °C	CS-I	CS-I	Aluminum	---	---
	Recreation NP		acute	chronic	Arsenic	340	---
Reviewable	Water Supply	D.O. (mg/L)	---	6.0	Arsenic(T)	---	0.02-10 ^A
		D.O. (spawning)	---	7.0	Beryllium	---	---
Qualifiers:		pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS
Other:		chlorophyll a (mg/m ²)	---	150	Cadmium(T)	5.0	---
*Uranium(acute) = See 37.5(3) for details.		E. Coli (per 100 mL)	---	630 205	Chromium III	---	TVS
*Uranium(chronic) = See 37.5(3) for details.		Inorganic (mg/L)			Chromium III(T)	50	---
			acute	chronic	Chromium VI	TVS	TVS
		Ammonia	TVS	TVS	Copper	TVS	TVS
		Boron	---	0.75	Iron	---	WS
		Chloride	---	250	Iron(T)	---	1000
		Chlorine	0.019	0.011	Lead	TVS	TVS
		Cyanide	0.005	---	Lead(T)	50	---
		Nitrate	10	---	Manganese	TVS	TVSWS
		Nitrite	0.05	0.05	Mercury(T)	---	0.01(†)
		Phosphorus	---	0.11	Molybdenum(T)	---	160 150
		Sulfate	---	WS	Nickel	TVS	TVS
		Sulfide	---	0.002	Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	---	varies*
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS White River

9b. All tributaries to the White River, including wetlands, from a point immediately above the confluence with Flag Creek, to a point immediately above the confluence with Piceance Creek, which are not within the boundary of National Forest lands, except for the specific listings in segments 9c and 9d.

COLCWH09B Classifications		Physical and Biological		Metals (ug/L)		
Designation		DM	MWAT		acute	chronic
Reviewable	Agriculture					
	Aq Life Cold 2	CS-II	CS-II	Aluminum	---	---
	Recreation NP	acute	chronic	Arsenic	340	---
	Water Supply			Arsenic(T)	---	0.02-10 ^A
Qualifiers:		D.O. (mg/L)	6.0	Beryllium	---	---
Other:		D.O. (spawning)	7.0	Cadmium	TVS(tr)	TVS
		pH	6.5 - 9.0	Cadmium(T)	<u>5.0</u>	---
*Uranium(acute) = See 37.5(3) for details. *Uranium(chronic) = See 37.5(3) for details.		chlorophyll a (mg/m ²)	150	Chromium III	---	TVS
		E. Coli (per 100 mL)	630 <u>205</u>	Chromium III(T)	50	---
		Inorganic (mg/L)		Chromium VI	TVS	TVS
		acute	chronic	Copper	TVS	TVS
		Ammonia	TVS	Iron	---	WS
		Boron	0.75	Iron(T)	---	1000
		Chloride	250	Lead	TVS	TVS
		Chlorine	0.019	Lead(T)	<u>50</u>	---
		Cyanide	---	Manganese	TVS	TVS/WS
		Nitrate	10	Mercury(T)	---	0.01(†)
		Nitrite	0.05	Molybdenum(T)	---	160 <u>150</u>
		Phosphorus	0.11	Nickel	TVS	TVS
		Sulfate	WS	Nickel(T)	---	<u>100</u>
		Sulfide	0.002	Selenium	TVS	TVS
				Silver	TVS	TVS(tr)
				Uranium	varies*	varies*
				Zinc	TVS	TVS

9c. Mainstems of Flag Creek, including all tributaries and wetlands, from the source to a point just below the confluence with the East Fork of Flag Creek.

COLCWH09C Classifications		Physical and Biological		Metals (ug/L)		
Designation		DM	MWAT		acute	chronic
Reviewable	Agriculture					
	Aq Life Cold 2	CS-I	CS-I	Aluminum	---	---
	Recreation E	6/1-8/31	acute	chronic	Arsenic	340
	Recreation N	9/1-5/31			Arsenic(T)	---
	Water Supply				Arsenic(T)	0.02-40 ^A
Qualifiers:		D.O. (mg/L)	6.0	Beryllium	---	---
Other:		D.O. (spawning)	7.0	Cadmium	TVS(tr)	TVS
		pH	6.5 - 9.0	Cadmium(T)	<u>5.0</u>	---
*Uranium(acute) = See 37.5(3) for details. *Uranium(chronic) = See 37.5(3) for details.		chlorophyll a (mg/m ²)	150	Chromium III	---	TVS
		E. Coli (per 100 mL)	6/1-8/31	126	Chromium III(T)	50
		E. Coli (per 100 mL)	9/1-5/31	Chromium VI	TVS	TVS
		Inorganic (mg/L)		Copper	TVS	TVS
		acute	chronic	Iron	---	WS
		Ammonia	TVS	Iron(T)	---	1000
		Boron	0.75	Lead	TVS	TVS
		Chloride	250	Lead(T)	<u>50</u>	---
		Chlorine	0.019	Manganese	TVS	TVS/WS
		Cyanide	---	Mercury(T)	---	0.01(†)
		Nitrate	10	Molybdenum(T)	---	160 <u>150</u>
		Nitrite	0.05	Nickel	TVS	TVS
		Phosphorus	0.11	Nickel(T)	---	<u>100</u>
		Sulfate	WS	Selenium	TVS	TVS
		Sulfide	0.002	Silver	TVS	TVS(tr)
				Uranium	varies*	varies*
				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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS White River

9d. Sulphur Creek, including all tributaries and wetlands, from the source to the confluence with the White River. Flag Creek, including all tributaries and wetlands, from a point just below the confluence with the East Fork of Flag Creek to the confluence with the White River.							
COLCWH09D	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture		DM	MWAT		acute chronic	
Reviewable	Aq Life Cold 2	Temperature °C	CS-II	CS-II	Aluminum	--- ---	
	Recreation E 6/1-8/31		acute	chronic	Arsenic	340 ---	
	Recreation-N 9/1-5/31	D.O. (mg/L)	---	6.0	Arsenic(T)	--- 0.02- 10 ^A	
	Water Supply	D.O. (spawning)	---	7.0	Beryllium	--- ---	
Qualifiers:		pH	6.5 - 9.0	---	Cadmium	TVS(tr) TVS	
Water + Fish Standards Apply		chlorophyll a (mg/m ²)	---	150	Cadmium(T)	5.0 ---	
Other:		E. Coli (per 100 mL)	6/1-8/31	---	126	Chromium III	---
Temporary Modification(s):		E. Coli (per 100 mL)	9/1-5/31	---	630	Chromium III(T)	50 ---
Arsenic(chronic) = hybrid		Inorganic (mg/L)				Chromium VI	TVS TVS
Expiration Date of 12/31/2021			acute	chronic		Copper	TVS TVS
*Uranium(acute) = See 37.5(3) for details.		Ammonia	TVS	TVS		Iron	---
*Uranium(chronic) = See 37.5(3) for details.		Boron	---	0.75		Iron(T)	---
		Chloride	---	250		Lead	TVS TVS
		Chlorine	0.019	0.011		Lead(T)	50 ---
		Cyanide	0.005	---		Manganese	TVS TVS/WS
		Nitrate	10	---		Mercury(T)	---
		Nitrite	--0.05	0.05---		Molybdenum(T)	---
		Phosphorus	---	0.11		Nickel	TVS TVS
		Sulfate	---	WS		Nickel(T)	---
		Sulfide	---	0.002		Selenium	TVS TVS
						Silver	TVS TVS(tr)
						Uranium	--- varies* ---varies*
						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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

White River

10a. All lakes and reservoirs tributary to the White River, from the confluence of the North and South Forks of the White River to a point immediately above the confluence of the White River and Piceance Creek, except for specific listing listings in Segments 11, 25 and 27.						
COLCWH10A	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	acute chronic		
Reviewable	Aq Life Cold 1 Recreation E Water Supply	acute	chronic	Aluminum	---	---
		Temperature °C	CL	CL	Arsenic	340
		D.O. (mg/L)	---	6.0	Arsenic(T)	---
		D.O. (spawning)	---	7.0	Beryllium	---
		pH	6.5 - 9.0	---	Cadmium	TVS(tr) TVS
		chlorophyll a (ug/L)	---	8*	Cadmium(T)	5.0 ---
		E. Coli (per 100 mL)	---	126	Chromium III	---
					Chromium III(T)	50 ---
					Chromium VI	TVS TVS
					Copper	TVS TVS
					Iron	---
					Iron(T)	---
					Lead	TVS TVS
					Lead(T)	50 ---
					Manganese	TVS TVS/WS
					Mercury(T)	---
					Molybdenum(T)	---
					Nickel	TVS TVS
					Nickel(T)	---
					Selenium	TVS TVS
					Silver	TVS TVS(tr)
					Uranium	---
					Zinc	TVS TVS
					varies*	---varies*

Qualifiers:

Other:

*chlorophyll a (ug/L)(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area.

*Phosphorus(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area.

*Uranium(acute) = See 37.5(3) for details.

*Uranium(chronic) = See 37.5(3) for details.

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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS White River

10b. Mainstem of Big Beaver Creek, Miller Creek, and North Elk Creek, including their tributaries and wetlands, from their boundary with National Forest lands to their confluences with the White River. Mainstem of Coal Creek, including all tributaries and wetlands, from the source to the confluence with the White River.

COLCWH10B Classifications		Physical and Biological		Metals (ug/L)		
Designation		DM	MWAT		acute	chronic
Reviewable	Agriculture					
	Aq Life Cold 1	CS-I	CS-I	Aluminum	---	---
	Recreation P	acute	chronic	Arsenic	340	---
	Water Supply			Arsenic(T)	---	0.02
Qualifiers:		D.O. (mg/L)	6.0	Beryllium	---	---
Other:		D.O. (spawning)	7.0	Cadmium	TVS(tr)	TVS
Temporary Modification(s):		pH	6.5 - 9.0	Cadmium(T)	5.0	---
Arsenic(chronic) = hybrid		chlorophyll a (mg/m ²)	150	Chromium III	---	TVS
Expiration Date of 12/31/2021		E. Coli (per 100 mL)	205	Chromium III(T)	50	---
*Uranium(acute) = See 37.5(3) for details.		Inorganic (mg/L)		Chromium VI	TVS	TVS
*Uranium(chronic) = See 37.5(3) for details.				Copper	TVS	TVS
		acute	chronic	Iron	---	WS
		Ammonia	TVS	TVS	---	1000
		Boron	---	0.75	Lead	TVS
		Chloride	---	250	Lead(T)	50
		Chlorine	0.019	0.011	Manganese	TVS
		Cyanide	0.005	---	Mercury(T)	---
		Nitrate	10	---	Molybdenum(T)	---
		Nitrite	0.05	0.05	Nickel	TVS
		Phosphorus	---	0.11	Nickel(T)	---
		Sulfate	---	WS	Selenium	TVS
		Sulfide	---	0.002	Silver	TVS
					Uranium	varies*
					Zinc	TVS

11. Rio Blanco Lake and Taylor Draw Reservoir (a.k.a. Kenney Reservoir).

COLCWH11 Classifications		Physical and Biological		Metals (ug/L)		
Designation		DM	MWAT		acute	chronic
Reviewable	Agriculture					
	Aq Life Warm 1	WL	WL	Aluminum	---	---
	DUWS*	acute	chronic	Arsenic	340	---
	Recreation E			Arsenic(T)	---	0.02
	Water Supply	D.O. (mg/L)	5.0	Beryllium	---	---
	DUWS*	pH	6.5 - 9.0	Cadmium	TVS	TVS
Qualifiers:		chlorophyll a (ug/L)	20*	Cadmium(T)	5.0	---
Other:		E. Coli (per 100 mL)	126	Chromium III	---	TVS
*chlorophyll a (ug/L)(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area.		Inorganic (mg/L)		Chromium III(T)	50	---
*Classification: Kenney Reservoir = DUWS				Chromium VI	TVS	TVS
*Phosphorus(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area.		acute	chronic	Copper	TVS	TVS
*Uranium(acute) = See 37.5(3) for details.		Ammonia	TVS	TVS	---	WS
*Uranium(chronic) = See 37.5(3) for details.		Boron	---	0.75	Iron	---
		Chloride	---	250	Iron(T)	---
		Chlorine	0.019	0.011	Lead	TVS
		Cyanide	0.005	---	Lead(T)	50
		Nitrate	10	---	Manganese	TVS
		Nitrite	0.05	0.05	Mercury(T)	---
		Phosphorus	---	0.083*	Molybdenum(T)	---
		Sulfate	---	WS	Nickel	TVS
		Sulfide	---	0.002	Nickel(T)	---
					Selenium	TVS
					Silver	TVS
					Uranium	varies*
					Zinc	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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS White River

12. Mainstem of the White River from a point immediately above the confluence with Piceance Creek to a point immediately above the confluence with Douglas Creek.							
COLCWH12	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT		acute	chronic	
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)	---	0.02
		pH	6.5 - 9.0	---	Beryllium	---	---
Qualifiers:		chlorophyll a (mg/m ²)	---	---	Cadmium	TVS	TVS
Other:		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0	---
Temporary Modification(s):		Inorganic (mg/L)			Chromium III	---	TVS
Arsenic(chronic) = hybrid			acute	chronic	Chromium III(T)	50	---
Expiration Date of 12/31/2021		Ammonia	TVS	TVS	Chromium VI	TVS	TVS
*Uranium(acute) = See 37.5(3) for details.		Boron	---	0.75	Copper	TVS	TVS
*Uranium(chronic) = See 37.5(3) for details.		Chloride	---	250	Iron	---	WS
		Chlorine	0.019	0.011	Iron(T)	---	1000
		Cyanide	0.005	---	Lead	TVS	TVS
		Nitrate	10	---	Lead(T)	50	---
		Nitrite	---0.05	0.05---	Manganese	TVS	TVSWS
		Phosphorus	---	---	Mercury(T)	---	0.01(t)
		Sulfate	---	WS	Molybdenum(T)	---	160150
		Sulfide	---	0.002	Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	---	---varies*
					Zinc	TVS	TVS

13a. All tributaries to the White River, including all wetlands, from a point immediately below the confluence with Piceance Creek to a point immediately above the confluence with Douglas Creek, except for the specific-listings in Segments 13b through 20.

COLCWH13A	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT		acute	chronic	
UP	Aq Life Warm 2	Temperature °C	WS-III	WS-III	Aluminum	---340	---
	Recreation NP		acute	chronic	Arsenic(T)	---	100
Qualifiers:		D.O. (mg/L)	---	5.0	Beryllium(T)	---	400
Other:		pH	6.5 - 9.0	---	Cadmium(T)	---TVS	40TVS
*Uranium(acute) = See 37.5(3) for details.		chlorophyll a (mg/m ²)	---	---150	Chromium III	TVS	TVS
*Uranium(chronic) = See 37.5(3) for details.		E. Coli (per 100 mL)	---	630205	Chromium III(T)	---	100
		Inorganic (mg/L)			Chromium VI(T)	---TVS	400TVS
			acute	chronic	Copper(T)	---TVS	200TVS
		Ammonia	---TVS	---TVS	Iron(T)	---	---1000
		Boron	---	0.75	Lead(T)	---TVS	400TVS
		Chloride	---	---	Manganese(T)	---TVS	200TVS
		Chlorine	-0.019	-0.011	Mercury(T)	---	---0.01
		Cyanide	0.2005	---	Molybdenum(T)	---	160150
		Nitrate	100	---	Nickel(T)	---TVS	200TVS
		Nitrite	---0.05	40---	Selenium(T)	---TVS	20TVS
		Phosphorus	---	0.17	Silver	---TVS	---TVS
		Sulfate	---	---	Uranium	---	---varies*
		Sulfide	---	-0.002	Zinc(T)	---TVS	2000TVS

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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS White River

13b. Mainstem of Yellow Creek including all wetlands from the source to immediately below the confluence with Barcus Creek. All tributaries to Yellow Creek from the source to the White River, including wetlands.

COLCWH13B	Classifications	Physical and Biological		Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute		chronic
Reviewable	Aq Life Warm 2	Temperature °C	WS-III	WS-III	Aluminum	---
	Recreation P		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/m ²)	---	150*	Cadmium	TVS
		E. Coli (per 100 mL)	---	205	Cadmium(T)	5.0
		Inorganic (mg/L)			Chromium III	---
			acute	chronic	Chromium III(T)	50
		Ammonia	TVS	TVS	Chromium VI	TVS
		Boron	---	5.0	Copper	TVS
		Chloride	---	250	Iron	---
		Chlorine	0.019	0.011	Iron(T)	---
		Cyanide	0.005	---	Lead	TVS
		Nitrate	10	---	Lead(T)	50
		Nitrite	---0.05	0.05---	Manganese	TVS
		Phosphorus	---	0.17*	Mercury(T)	---
		Sulfate	---	WS	Molybdenum(T)	---
		Sulfide	---	0.002	Nickel	TVS
					Nickel(T)	---
					Selenium	TVS
					Silver	TVS
					Uranium	---
					Uranium	varies*
					Zinc	TVS

13c. Mainstem of Yellow Creek, including all wetlands from immediately below the confluence with Barcus Creek to the confluence with the White River.

COLCWH13C	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 P		acute	chronic	Arsenic	340
Qualifiers:		D.O. (mg/L)	---	5.0	Arsenic(T)	---
		pH	6.5 - 9.0	---	Beryllium	---
Other:		chlorophyll a (mg/m ²)	---	150	Cadmium	TVS
		E. Coli (per 100 mL)	---	205	Chromium III	TVS
		Inorganic (mg/L)			Chromium III(T)	---
			acute	chronic	Chromium VI	TVS
		Ammonia	TVS	TVS	Copper	TVS
		Boron	---	5.0	Iron(T)	---
		Chloride	---	---	Lead	TVS
		Chlorine	0.019	0.011	Manganese	TVS
		Cyanide	0.005	---	Mercury(T)	---
		Nitrate	100	---	Molybdenum(T)	---
		Nitrite	10.05	10---	Nickel	TVS
		Phosphorus	---	0.17	Selenium	TVS
		Sulfate	---	---	Silver	TVS
		Sulfide	---	0.002	Uranium	---
					Uranium	varies*
					Zinc	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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS White River

13d. Violet Springs Ponds- (39.999928, -108.350489) .							
COLCWH13D Classifications		Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT		acute	chronic	
Reviewable	Aq Life Cold 2 Recreation P	CL	CL	Aluminum	---	---	
Qualifiers:		acute	chronic	Arsenic	340	---	
		D.O. (mg/L)	---	6.0	Arsenic(T)	---	100
Other:	*chlorophyll a (ug/L)(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area. *Phosphorus(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area. *Uranium(acute) = See 37.5(3) for details. *Uranium(chronic) = See 37.5(3) for details.	pH	6.5 - 9.0	---	Beryllium	---	---
		chlorophyll a (ug/L)	---	8*	Cadmium	TVS	TVS
E. Coli (per 100 mL)	---	205	Chromium III	TVS	TVS		
Inorganic (mg/L)			Chromium III(T)	---	100		
		acute	chronic	Chromium VI	TVS	TVS	
Ammonia	TVS	TVS	Copper	TVS	TVS		
Boron	---	5.0	Iron(T)	---	1000		
Chloride	---	---	Lead	TVS	TVS		
Chlorine	0.019	0.011	Manganese	TVS	TVS		
Cyanide	0.005	---	Mercury(T)	---	0.01(†)		
Nitrate	100	---	Molybdenum(T)	---	460 150		
Nitrite	0.05	40 ---	Nickel	TVS	TVS		
Phosphorus	---	0.025*	Selenium	TVS	TVS		
Sulfate	---	---	Silver	TVS	TVS		
Sulfide	---	0.002	Uranium	---	varies*	---varies*	
			Zinc	TVS	TVS		
14a. Mainstem of Piceance Creek from the source to a point just below the confluence with Hunter Creek.							
COLCWH14A Classifications		Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT		acute	chronic	
Reviewable	Aq Life Cold 1 Recreation P Water Supply	CS-I	CS-I	Aluminum	---	---	
Qualifiers:		acute	chronic	Arsenic	340	---	
		D.O. (mg/L)	---	6.0	Arsenic(T)	---	0.02
Other:	Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2021 *Uranium(acute) = See 37.5(3) for details. *Uranium(chronic) = See 37.5(3) for details.	D.O. (spawning)	---	7.0	Beryllium	---	---
		pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS
chlorophyll a (mg/m ²)	---	150	Cadmium(T)	<u>5.0</u>	---		
E. Coli (per 100 mL)	---	205	Chromium III	---	TVS		
Inorganic (mg/L)			Chromium III(T)	50	---		
		acute	chronic	Chromium VI	TVS	TVS	
Ammonia	TVS	TVS	Copper	TVS	TVS		
Boron	---	0.75	Iron	---	WS		
Chloride	---	250	Iron(T)	---	1000		
Chlorine	0.019	0.011	Lead	TVS	TVS		
Cyanide	0.005	---	Lead(T)	<u>50</u>	---		
Nitrate	10	---	Manganese	TVS	TVS/WS		
Nitrite	0.05	0.05 ---	Mercury(T)	---	0.01(†)		
Phosphorus	---	0.11	Molybdenum(T)	---	460 150		
Sulfate	---	WS	Nickel	TVS	TVS		
Sulfide	---	0.002	Nickel(T)	---	<u>100</u>		
			Selenium	TVS	TVS		
			Silver	TVS	TVS(tr)		
			Uranium	---	varies*	---varies*	
			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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS White River

14b. Mainstem of Piceance Creek from a point just below the confluence with Hunter Creek to a point just below the confluence with Ryan Gulch.							
COLCWH14B	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute		chronic	
Reviewable	Aq Life Cold 1 Recreation P Water Supply	Temperature °C	CS-II	CS-II	Aluminum	---	---
Qualifiers:		acute	chronic	Arsenic	340	---	
		D.O. (mg/L)	---	6.0	Arsenic(T)	---	7-60 02
Other:	*Uranium(acute) = See 37.5(3) for details. *Uranium(chronic) = See 37.5(3) for details.	D.O. (spawning)	---	7.0	Beryllium	---	---
		pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS
		Inorganic (mg/L)					
		acute	chronic	Cadmium(T)	5.0	---	
		Ammonia	TVS	TVS	Chromium III	TVS ---	TVS
		Boron	---	0.75	Chromium III(T)	--- 50	400---
		Chloride	---	250	Chromium VI	TVS	TVS
		Chlorine	0.019	0.011	Copper	TVS	TVS
		Cyanide	0.005	---	Iron	---	WS
		Nitrate	100 10	---	Iron(T)	---	1000
		Nitrite	0.05	0.05 ---	Lead	TVS	TVS
		Phosphorus	---	0.11	Lead(T)	50	---
		Sulfate	---	WS	Manganese	TVS	TVS WS
		Sulfide	---	0.002	Mercury(T)	---	0.01(†)
					Molybdenum(T)	---	160 150
					Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	---	varies*
					Zinc	TVS	TVS

15. Mainstem of Piceance Creek from a point just below the confluence with Ryan Gulch to the confluence with the White River. The Dry Fork of Piceance Creek, including all tributaries and wetlands, from a point just below the confluence with Little Reigan Gulch to the confluence with Piceance Creek, except for the specific listings in Segment 18.							
COLCWH15	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute		chronic	
Reviewable	Aq Life Warm 2 Recreation P	Temperature °C	WS-II	WS-II	Aluminum	---	---
Qualifiers:	Fish Ingestion Standards Apply	acute	chronic	Arsenic	340	---	
		D.O. (mg/L)	---	5.0	Arsenic(T)	---	400 7.6
Other:	*Uranium(acute) = See 37.5(3) for details. *Uranium(chronic) = See 37.5(3) for details.	pH	6.5 - 9.0	---	Beryllium	---	---
		chlorophyll a (mg/m ²)	---	150	Cadmium	TVS	TVS
		Inorganic (mg/L)					
		acute	chronic	Chromium III	TVS	TVS	
		Ammonia	TVS	TVS	Chromium III(T)	---	100
		Boron	---	0.75	Chromium VI	TVS	TVS
		Chloride	---	250	Copper	TVS	TVS
		Chlorine	0.019	0.011	Iron(T)	---	1000
		Cyanide	0.005	---	Lead	TVS	TVS
		Nitrate	100	---	Manganese	TVS	TVS
		Nitrite	0.05	0.05 ---	Mercury(T)	---	0.01(†)
		Phosphorus	---	0.11	Molybdenum(T)	---	160 150
		Sulfate	---	---	Nickel	TVS	TVS
		Sulfide	---	0.002	Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	---	varies*
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS White River

16a. All tributaries to Piceance Creek, including all wetlands, from the source to a point immediately below the confluence with Dry Thirteenmile Creek, ~~except for the specific listings in Segments 15, 17, 18, 19 and 20. Dudley Gulch.~~

COLCWH16A Classifications		Physical and Biological		Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute		chronic
Reviewable	Aq Life Warm 2 Recreation NP Water Supply	WS-III	WS-III	Aluminum	---	---
Qualifiers:		acute	chronic	Arsenic	340	---
Other:		---	5.0	Arsenic(T)	---	0.02-10 ^A
		6.5 - 9.0	---	Beryllium	---	---
		---	150	Cadmium	TVS	TVS
		---	630205	Cadmium(T)	<u>5.0</u>	---
		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)	<u>50</u>	---
		0.05	0.05	Manganese	TVS	TVS/WS
		---	0.11	Mercury(T)	---	0.01(t)
		---	WS	Molybdenum(T)	---	160150
		---	0.002	Nickel	TVS	TVS
				Nickel(T)	---	<u>100</u>
				Selenium	TVS	TVS
				Silver	TVS	TVS
				Uranium	---	varies*
				Zinc	TVS	TVS

*Uranium(acute) = See 37.5(3) for details.
*Uranium(chronic) = See 37.5(3) for details.

16b. All tributaries to Piceance Creek, including all wetlands, from a point immediately below the confluence with Dry Thirteenmile Creek to the confluence with the White River, except for ~~the specific listings in Segments 15, 17, 18, 19 and 20.~~ ~~4818a, 18b,~~ 19 and 20.

COLCWH16B Classifications		Physical and Biological		Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute		chronic
Reviewable	Aq Life Warm 2 Recreation NP	WS-III	WS-III	Aluminum	---	---
Qualifiers:		acute	chronic	Arsenic	340	---
Other:		---	5.0	Arsenic(T)	---	100
		6.5 - 9.0	---	Beryllium	---	---
		---	150	Cadmium	TVS	TVS
		---	630205	Chromium III	TVS	TVS
		Inorganic (mg/L)		Chromium III(T)	---	100
		acute	chronic	Chromium VI	TVS	TVS
		TVS	TVS	Copper	TVS	TVS
		---	0.75	Iron(T)	---	1000
		---	250	Lead	TVS	TVS
		0.019	0.011	Manganese	TVS	TVS
		0.005	---	Mercury(T)	---	0.01(t)
		100	---	Molybdenum(T)	---	160150
		0.05	0.05	Nickel	TVS	TVS
		---	0.11	Selenium	TVS	TVS
		---	---	Silver	TVS	TVS
		---	0.002	Uranium	---	varies*
				Zinc	TVS	TVS

*Uranium(acute) = See 37.5(3) for details.
*Uranium(chronic) = See 37.5(3) for details.

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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS White River

17. Stewart Gulch from the sources of the East, Middle, and West Forks to the confluence with Piceance Creek.							
COLCWH17	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT		acute	chronic	
Reviewable	Aq Life Cold 2	Temperature °C	CS-I	CS-I	Aluminum	---	---
	Recreation P		acute	chronic	Arsenic	340	---
Qualifiers:		D.O. (mg/L)	---	6.0	Arsenic(T)	---	7.6
Fish Ingestion <u>Standards Apply</u>		D.O. (spawning)	---	7.0	Beryllium	---	---
Other: *Uranium(acute) = See 37.5(3) for details. *Uranium(chronic) = See 37.5(3) for details.		pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS
		chlorophyll a (mg/m ²)	---	---	Chromium III	TVS	TVS
		E. Coli (per 100 mL)	---	205	Chromium III(T)	---	100
		Inorganic (mg/L)			Chromium VI	TVS	TVS
		acute	chronic		Copper	TVS	TVS
		Ammonia	TVS	TVS	Iron(T)	---	1000
		Boron	---	0.75	Lead	TVS	TVS
		Chloride	---	---	Manganese	TVS	TVS
		Chlorine	0.019	0.011	Mercury(T)	---	0.01(†)
		Cyanide	0.005	---	Molybdenum(T)	---	460 150
		Nitrate	100	---	Nickel	TVS	TVS
		Nitrite	0.05	0.05	Selenium	TVS	TVS
		Phosphorus	---	0.11	Silver	TVS	TVS(tr)
		Sulfate	---	---	Uranium	---	varies*
		Sulfide	---	0.002	Zinc	TVS	TVS

18a. Willow and Hunter Creeks, including all tributaries and wetlands, from their sources to their confluences with Piceance Creek.							
COLCWH18A	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT		acute	chronic	
Reviewable	Aq Life Cold 2	Temperature °C	CS-II	CS-II	Aluminum	---	---
	Recreation NP		acute	chronic	Arsenic	340	---
Qualifiers:		D.O. (mg/L)	---	6.0	Arsenic(T)	---	100
Other: *Uranium(acute) = See 37.5(3) for details. *Uranium(chronic) = See 37.5(3) for details.		D.O. (spawning)	---	7.0	Beryllium	---	---
		pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS
		chlorophyll a (mg/m ²)	---	150	Chromium III	TVS	TVS
		E. Coli (per 100 mL)	---	630 205	Chromium III(T)	---	100
		Inorganic (mg/L)			Chromium VI	TVS	TVS
		acute	chronic		Copper	TVS	TVS
		Ammonia	TVS	TVS	Iron(T)	---	1000
		Boron	---	0.75	Lead	TVS	TVS
		Chloride	---	---	Manganese	TVS	TVS
		Chlorine	0.019	0.011	Mercury(T)	---	0.01(†)
		Cyanide	0.005	---	Molybdenum(T)	---	460 150
		Nitrate	100	---	Nickel	TVS	TVS
		Nitrite	0.05	0.05	Selenium	TVS	TVS
		Phosphorus	---	0.11	Silver	TVS	TVS(tr)
		Sulfate	---	---	Uranium	---	varies*
	Sulfide	---	0.002	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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS White River

18b. Mainstem of the Dry Fork of Piceance Creek, including all tributaries and wetlands, from the source to a point just below the confluence with Little Reigan Gulch. Box D Gulch from its source to the confluence with the Dry Fork of Piceance Creek.

COLCWH18B Classifications		Physical and Biological			Metals (ug/L)		
Designation	Agriculture Aq Life Cold Warm 2 Recreation P Water Supply	DM	MWAT	acute			chronic
Reviewable		acute	chronic	Aluminum			
		Temperature °C	CSWS-II	CSWS-II	---	---	---
		D.O. (mg/L)	---	6.0	Arsenic	340	---
Qualifiers:		D.O. (spawning)	---	7.0	Arsenic(T)	---	0.02-10 ^A
Other:		pH	6.5 - 9.0	---	Beryllium	---	---
		chlorophyll a (mg/m ²)	---	150	Cadmium	TVS(tr)	TVS
		E. Coli (per 100 mL)	---	205	Cadmium(T)	5.0	---
					Chromium III	---	TVS
					Chromium III(T)	50	---
					Chromium VI	TVS	TVS
					Copper	TVS	TVS
					Iron	---	WS
					Iron(T)	---	1000
					Lead	TVS	TVS
					Lead(T)	50	---
					Manganese	TVS	TVS/WS
					Mercury(T)	---	0.01(†)
					Molybdenum(T)	---	160150
					Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	---	---varies*
					Zinc	TVS	TVS

19. Mainstem of Fawn Creek from the source to the confluence with Black Sulphur Creek.

COLCWH19 Classifications		Physical and Biological			Metals (ug/L)		
Designation	Agriculture Aq Life Cold 1 Recreation P	DM	MWAT	acute			chronic
Reviewable		acute	chronic	Aluminum			
		Temperature °C	CS-I	CS-I	---	---	---
		D.O. (mg/L)	---	6.0	Arsenic	340	---
Qualifiers:		D.O. (spawning)	---	7.0	Arsenic(T)	---	7.6
Other:		pH	6.5 - 9.0	---	Beryllium	---	---
		chlorophyll a (mg/m ²)	---	150	Cadmium	TVS(tr)	TVS
		E. Coli (per 100 mL)	---	205	Chromium III	TVS	TVS
					Chromium III(T)	---	100
					Chromium VI	TVS	TVS
					Copper	TVS	TVS
					Iron(T)	---	1000
					Lead	TVS	TVS
					Manganese	TVS	TVS
					Mercury(T)	---	0.01(†)
					Molybdenum(T)	---	160150
					Nickel	TVS	TVS
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	---	---varies*
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS White River

20. Mainstem of Black Sulphur Creek, including all tributaries and wetlands, from the source to the confluence with Piceance Creek, except for the listing in Segment 19.							
COLCWH20	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture		DM	MWAT		acute	chronic
Reviewable	Aq Life Cold 1 Recreation P Water Supply	Temperature °C	CS-I	CS-I	Aluminum	---	---
		acute	chronic				
		D.O. (mg/L)	---	6.0	Arsenic	340	---
		D.O. (spawning)	---	7.0	Arsenic(T)	---	0.02
Qualifiers:		pH	6.5 - 9.0	---	Beryllium	---	---
Other:		chlorophyll a (mg/m ²)	---	---	Cadmium	TVS(tr)	TVS
Temporary Modification(s):		E. Coli (per 100 mL)	---	205	Cadmium(T)	5.0	---
Arsenic(chronic) = hybrid		Inorganic (mg/L)			Chromium III	---	TVS
Expiration Date of 12/31/2021		acute	chronic				
*Uranium(acute) = See 37.5(3) for details.		Ammonia	TVS	TVS	Chromium III(T)	50	---
*Uranium(chronic) = See 37.5(3) for details.		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	---0.05	0.05---	Lead(T)	50	---
		Phosphorus	---	0.11	Manganese	TVS	TVS/WS
		Sulfate	---	WS	Mercury(T)	---	0.01(†)
		Sulfide	---	0.002	Molybdenum(T)	---	460150
					Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	---	---varies*
					Zinc	TVS	TVS
21. Mainstem of the White River from a point immediately above the confluence with Douglas Creek to the Colorado/Utah border.							
COLCWH21	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-II	WS-II	Aluminum	---	---
		acute	chronic				
		D.O. (mg/L)	---	5.0	Arsenic	340	---
Qualifiers:		pH	6.5 - 9.0	---	Arsenic(T)	---	0.02
Other:		chlorophyll a (mg/m ²)	---	---	Beryllium	---	---
Temporary Modification(s):		E. Coli (per 100 mL)	---	126	Cadmium	TVS	TVS
Arsenic(chronic) = hybrid		Inorganic (mg/L)			Cadmium(T)	5.0	---
Expiration Date of 12/31/2021		acute	chronic				
*Uranium(acute) = See 37.5(3) for details.		Ammonia	TVS	TVS	Chromium III	---	TVS
*Uranium(chronic) = See 37.5(3) for details.		Boron	---	0.75	Chromium III(T)	50	100
		Chloride	---	250	Chromium VI	TVS	TVS
		Chlorine	0.019	0.011	Copper	TVS	TVS
		Cyanide	0.005	---	Iron	---	WS
		Nitrate	10	---	Iron(T)	---	1000
		Nitrite	---0.05	0.05---	Lead	TVS	TVS
		Phosphorus	---	---	Lead(T)	50	---
		Sulfate	---	WS	Manganese	TVS	TVS/WS
		Sulfide	---	0.002	Mercury(T)	---	0.01(†)
					Molybdenum(T)	---	460150
					Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	---	---varies*
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS White River

24. All lakes and reservoirs tributary to the White River, which are within the boundaries of the Flat Tops Wilderness Area, including Trappers Lake.								
COLCWH24	Classifications	Physical and Biological			Metals (ug/L)			
Designation	Agriculture	DM	MWAT	acute chronic				
OW	Aq Life Cold 1	Temperature °C	CL	CL	Aluminum	---	---	
	Recreation E				Arsenic	340	---	
	Water Supply				Arsenic(T)	---	0.02	
Qualifiers:	D.O. (mg/L)	---	6.0		Beryllium	---	---	
Other:	D.O. (spawning)	---	7.0		Cadmium	TVS(tr)	TVS	
*chlorophyll a (ug/L)(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area. *Phosphorus(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area. *Uranium(acute) = See 37.5(3) for details. *Uranium(chronic) = See 37.5(3) for details.	pH	6.5 - 9.0	---		Cadmium(T)	5.0	---	
	chlorophyll a (ug/L)	---	8*		Chromium III	---	TVS	
	E. Coli (per 100 mL)	---	126		Chromium III(T)	50	---	
	Inorganic (mg/L)					Chromium VI	TVS	TVS
	Ammonia	TVS	TVS		Copper	TVS	TVS	
	Boron	---	0.75		Iron	---	WS	
	Chloride	---	250		Iron(T)	---	1000	
	Chlorine	0.019	0.011		Lead	TVS	TVS	
	Cyanide	0.005	---		Lead(T)	50	---	
	Nitrate	10	---		Manganese	TVS	TVS/WS	
	Nitrite	--0.05-	0.05---		Mercury(T)	---	0.01(†)	
	Phosphorus	---	0.025*		Molybdenum(T)	---	460150	
	Sulfate	---	WS		Nickel	TVS	TVS	
	Sulfide	---	0.002		Nickel(T)	---	100	
					Selenium	TVS	TVS	
					Silver	TVS	TVS(tr)	
					Uranium	varies*	--varies*	
					Zinc	TVS	TVS	

25. Lake Avery (a.k.a Big Beaver Reservoir).								
COLCWH25	Classifications	Physical and Biological			Metals (ug/L)			
Designation	Agriculture	DM	MWAT	acute chronic				
Reviewable	Aq Life Cold 1	Temperature °C	1/1-3/31	CLLvaries*	CLL	B	varies*	
	Recreation E	Temperature °C	4/1-12/31	CLL	20.7	B		
	Water Supply							
Qualifiers:	D.O. (mg/L)	---	6.0		Beryllium	---	---	
Other:	D.O. (spawning)	---	7.0		Cadmium	TVS(tr)	TVS	
*chlorophyll a (ug/L)(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area. *Phosphorus(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area. *Uranium(acute) = See 37.5(3) for details. *Uranium(chronic) = See 37.5(3) for details. *Temperature = DM=CLL and MWAT=CLL from 1/1-3/31 DM=CLL and MWAT=20.7 from 4/1-12/31	pH	6.5 - 9.0	---		Cadmium(T)	5.0	---	
	chlorophyll a (ug/L)	---	8*		Chromium III	---	TVS	
	E. Coli (per 100 mL)	---	126		Chromium III(T)	50	---	
	Inorganic (mg/L)					Chromium VI	TVS	TVS
	Ammonia	TVS	TVS		Copper	TVS	TVS	
	Boron	---	0.75		Iron	---	WS	
	Chloride	---	250		Iron(T)	---	1000	
	Chlorine	0.019	0.011		Lead	TVS	TVS	
	Cyanide	0.005	---		Lead(T)	50	---	
	Nitrate	10	---		Manganese	TVS	TVS/WS	
	Nitrite	--0.05-	0.05---		Mercury(T)	---	0.01(†)	
	Phosphorus	---	0.025*		Molybdenum(T)	---	460150	
	Sulfate	---	WS		Nickel	TVS	TVS	
	Sulfide	---	0.002		Nickel(T)	---	100	
					Selenium	TVS	TVS	
					Silver	TVS	TVS(tr)	
					Uranium	varies*	--varies*	
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS White River

26. All lakes and reservoirs tributary to the North and South Forks of the White River, from the Flat Tops Wilderness Area boundary to the confluence with the North and South Forks of the White River.

COLCWH26	Classifications	Physical and Biological		Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute		chronic
Reviewable	Aq Life Cold 1 Recreation U Water Supply	CL	CL	Aluminum	---	---
Qualifiers:		acute	chronic	Arsenic	340	---
Other:		D.O. (mg/L)	---	6.0	Arsenic(T)	---
		D.O. (spawning)	---	7.0	Beryllium	---
		pH	6.5 - 9.0	---	Cadmium	TVS(tr) TVS
		chlorophyll a (ug/L)	---	8*	Cadmium(T)	5.0 ---
		E. Coli (per 100 mL)	---	126	Chromium III	---
					Chromium III(T)	50 ---
		Inorganic (mg/L)			Chromium VI	TVS TVS
		acute	chronic		Copper	TVS TVS
		Ammonia	TVS	TVS	Iron	---
		Boron	---	0.75	Iron(T)	---
		Chloride	---	250	Lead	TVS TVS
		Chlorine	0.019	0.011	Lead(T)	50 ---
		Cyanide	0.005	---	Manganese	TVS TVS/WS
		Nitrate	10	---	Mercury(T)	---
		Nitrite	---0.05	0.05---	Molybdenum(T)	---
		Phosphorus	---	0.025*	Nickel	TVS TVS
		Sulfate	---	WS	Nickel(T)	--- 100
		Sulfide	---	0.002	Selenium	TVS TVS
					Silver	TVS TVS(tr)
					Uranium	--- varies* ---varies*
					Zinc	TVS TVS

*chlorophyll a (ug/L)(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area.
*Phosphorus(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area.
*Uranium(acute) = See 37.5(3) for details.
*Uranium(chronic) = See 37.5(3) for details.

27. All lakes and reservoirs tributary to the White River, from a point immediately above the confluence with Piceance Creek to the Colorado/Utah border, except for the specific listings in segments 11 and 13d.

COLCWH27	Classifications	Physical and Biological		Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute		chronic
Reviewable	Aq Life Warm 1 Recreation U	WL	WL	Aluminum	---	---
Qualifiers:		acute	chronic	Arsenic	340	---
Other:		D.O. (mg/L)	---	5.0	Arsenic(T)	---
		pH	6.5 - 9.0	---	Beryllium	---
		chlorophyll a (ug/L)	---	20*	Cadmium	TVS TVS
		E. Coli (per 100 mL)	---	126	Chromium III	TVS TVS
		Inorganic (mg/L)			Chromium III(T)	---
		acute	chronic		Chromium VI	TVS TVS
		Ammonia	TVS	TVS	Copper	TVS TVS
		Boron	---	0.75	Iron(T)	---
		Chloride	---	---	Lead	TVS TVS
		Chlorine	0.019	0.011	Manganese	TVS TVS
		Cyanide	0.005	---	Mercury(T)	---
		Nitrate	100	---	Molybdenum(T)	---
		Nitrite	---0.05	0.05---	Nickel	TVS TVS
		Phosphorus	---	0.083*	Selenium	TVS TVS
		Sulfate	---	---	Silver	TVS TVS
		Sulfide	---	0.002	Uranium	--- varies* ---varies*
					Zinc	TVS TVS

*chlorophyll a (ug/L)(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area.
*Phosphorus(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area.
*Uranium(acute) = See 37.5(3) for details.
*Uranium(chronic) = See 37.5(3) for details.

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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Colorado River

1. Mainstem of the Colorado River from the confluence with the Roaring Fork River to immediately below the confluence with Rifle Creek.							
COLCLC01	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute chronic			
Reviewable	Aq Life Cold 1	Temperature °C	<u>varies*CS-II</u>	<u>varies*CS-II</u>	Aluminum	---	---
	Recreation E	acute chronic			Arsenic	340	---
	Water Supply	D.O. (mg/L)	---	6.0	Arsenic(T)	---	0.02
Qualifiers:							
Other:							
Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2021 <u>*Uranium(acute) = See 37.5(3) for details.</u> <u>*Uranium(chronic) = See 37.5(3) for details.</u> <u>*Temperature(DM) = See 37.6(4) for temperature standards.</u> <u>*Temperature(MWAT) = See 37.6(4) for temperature standards.</u>		D.O. (spawning)	---	7.0	Beryllium	---	---
		pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS
		chlorophyll a (mg/m ²)	---	---	<u>Cadmium(T)</u>	<u>5.0</u>	<u>---</u>
		E. Coli (per 100 mL)	---	126	Chromium III	---	TVS
		Inorganic (mg/L)			Chromium III(T)	50	---
		acute chronic			Chromium VI	TVS	TVS
		Ammonia	TVS	TVS	Copper	TVS	TVS
		Boron	---	0.75	Iron	---	WS
		Chloride	---	250	Iron(T)	---	1000
		Chlorine	0.019	0.011	Lead	TVS	TVS
		Cyanide	0.005	---	<u>Lead(T)</u>	<u>50</u>	<u>---</u>
		Nitrate	10	---	Manganese	TVS	TVS/WS
		Nitrite	<u>---0.05</u>	<u>0.05---</u>	Mercury(T)	---	0.01(†)
		Phosphorus	---	---	Molybdenum(T)	---	<u>460150</u>
		Sulfate	---	WS	Nickel	TVS	TVS
		Sulfide	---	0.002	<u>Nickel(T)</u>	<u>---</u>	<u>100</u>
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	<u>---</u>	<u>---varies*</u>
					Zinc	TVS	TVS

2a. Mainstem of the Colorado River from immediately below the confluence with Rifle Creek to immediately above the confluence of Rapid Creek.							
COLCLC02A	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute chronic			
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)	---	0.02
Qualifiers:							
Other:							
Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2021 <u>*Uranium(acute) = See 37.5(3) for details.</u> <u>*Uranium(chronic) = See 37.5(3) for details.</u>		pH	6.5 - 9.0	---	Beryllium	---	---
		chlorophyll a (mg/m ²)	---	---	Cadmium	TVS	TVS
		E. Coli (per 100 mL)	---	126	<u>Cadmium(T)</u>	<u>5.0</u>	<u>---</u>
		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	---	<u>Lead(T)</u>	<u>50</u>	<u>---</u>
		Nitrite	<u>---0.05</u>	<u>0.05---</u>	Manganese	TVS	TVS/WS
		Phosphorus	---	---	Mercury(T)	---	0.01(†)
		Sulfate	---	WS	Molybdenum(T)	---	<u>460150</u>
		Sulfide	---	0.002	Nickel	TVS	TVS
					<u>Nickel(T)</u>	<u>---</u>	<u>100</u>
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	<u>---</u>	<u>---varies*</u>
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Colorado River

2b. Mainstem of the Colorado River from a point immediately above the confluence with Rapid Creek to immediately above the confluence of the Gunnison River.							
COLCLC02B	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT		acute	chronic	
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)	---	0.02
		pH	6.5 - 9.0	---	Beryllium	---	---
Qualifiers:		chlorophyll a (mg/m ²)	---	---	Cadmium	TVS	TVS
Other:	Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2021 *Uranium(acute) = See 37.5(3) for details. *Uranium(chronic) = See 37.5(3) for details.	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	---0.05	0.05---	Manganese	TVS	TVSWS
		Phosphorus	---	---	Mercury(T)	---	0.01(†)
		Sulfate	---	WS	Molybdenum(T)	---	160150
		Sulfide	---	0.002	Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	---	---varies*
						varies*	
					Zinc	TVS	TVS

3. Mainstem of the Colorado River from immediately above the confluence of the Gunnison River to the Colorado-Utah state line.							
COLCLC03	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT		acute	chronic	
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)	---	7.6
		pH	6.5 - 9.0	---	Beryllium	---	---
Qualifiers:		chlorophyll a (mg/m ²)	---	---	Cadmium	TVS	TVS
Other:	Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2021 *Uranium(acute) = See 37.5(3) for details. *Uranium(chronic) = See 37.5(3) for details.	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(T)	---	0.01(†)
		Nitrate	100	---	Molybdenum(T)	---	160150
		Nitrite	---0.05	0.05---	Nickel	TVS	TVS
		Phosphorus	---	---	Selenium	TVS	TVS
		Sulfate	---	---	Silver	TVS	TVS
		Sulfide	---	0.002	Uranium	---	---varies*
						varies*	
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Colorado River

4a. All tributaries, including wetlands, to the Colorado River from the confluence with the Roaring Fork River to a point immediately below the confluence with Parachute Creek except for the specific listings in Segments 4b, 4c, 4d, 4e, 5, 6, 7a, 7b, 8, 9a, 9c, 10, 11a, ~~c, h, and 12a.~~

COLCLC04A	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute	chronic		
Reviewable	Aq Life Cold 2 Recreation N Water Supply	acute	chronic				
		Temperature °C	CS-II CS-II	Aluminum	---	---	
		D.O. (mg/L)	---	6.0	Arsenic	340	---
		D.O. (spawning)	---	7.0	Arsenic(T)	---	0.02-10 ^A
Qualifiers:		pH	6.5 - 9.0	---	Beryllium	---	---
Other:		chlorophyll a (mg/m ²)	---	---	Cadmium	TVS	TVS
		E. Coli (per 100 mL)	---	630	Cadmium(T)	5.0	---
					Chromium III	---	TVS
					Chromium III(T)	50	---
					Chromium VI	TVS	TVS
					Copper	TVS	TVS
					Iron	---	WS
					Iron(T)	---	1000
					Lead	TVS	TVS
					Lead(T)	50	---
					Manganese	TVS	TVS/WS
					Mercury(T)	---	0.01(†)
					Molybdenum(T)	---	460150
					Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	---	---varies*
					Zinc	TVS	TVS

4b. South Canyon Hot Springs: (39.552964, -107.414232).

COLCLC04B	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Aq Life Warm 2	DM	MWAT	acute	chronic		
Reviewable	Recreation E	acute	chronic				
		D.O. (mg/L)	---	5.0	Aluminum	---	---
		pH	6.5 - 9.0	---	Arsenic	340	---
		chlorophyll a (mg/m ²)	---	150	Arsenic(T)	---	100
		E. Coli (per 100 mL)	---	126	Beryllium	---	---
					Cadmium	TVS	TVS
					Chromium III	TVS	TVS
					Chromium VI	TVS	TVS
					Copper	TVS	TVS
					Iron(T)	---	1000
					Lead	TVS	TVS
					Manganese	TVS	TVS
					Mercury(T)	---	0.01(†)
					Molybdenum(T)	---	---
					Nickel	TVS	TVS
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	---	---varies*
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Colorado River

4c. The mainstem of South Canyon Creek from the South Canyon Hot Springs to the confluence with the Colorado River.							
COLCLC04C	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT		acute	chronic	
Reviewable	Aq Life Warm 1	Temperature °C	WS-III	WS-III	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: Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2021 *chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 37.5(4). *Uranium(acute) = See 37.5(3) for details. *Uranium(chronic) = See 37.5(3) for details.		chlorophyll a (mg/m ²)	---	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	---0.05	0.05---	Manganese	TVS	TVSWS
		Phosphorus	---	0.17	Mercury(T)	---	0.01(†)
		Sulfate	---	WS	Molybdenum(T)	---	460150
		Sulfide	---	0.002	Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	---	---varies*
				Zinc	TVS	TVS	
					varies*	---	

4d. The mainstem of Dry Hollow Creek, including all tributaries and wetlands, from the source to the confluence with the Colorado River.							
COLCLC04D	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT		acute	chronic	
Reviewable	Aq Life Cold 2	Temperature °C	CS-II	CS-II	Aluminum	---	---
	Recreation NP		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: *Uranium(acute) = See 37.5(3) for details. *Uranium(chronic) = See 37.5(3) for details.		chlorophyll a (mg/m ²)	---	150	Cadmium	TVS	TVS
		E. Coli (per 100 mL)	---	630205	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	---0.05	0.05---	Manganese	TVS	TVS/WS
		Phosphorus	---	0.11	Mercury(T)	---	0.01(†)
		Sulfate	---	WS	Molybdenum(T)	---	460150
		Sulfide	---	0.002	Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	---	---varies*
				Zinc	TVS	TVS	
					varies*	---	

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 further details on applied standards 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	Agriculture Aq Life Cold 2 Recreation N	DM	MWAT		acute	chronic
Qualifiers:		acute	chronic			
Other: Temporary Modification(s): Copper(ac/ch) = current conditions Expiration Date of 12/31/2019 *Phosphorus(chronic) = applies only above the facilities listed at 37.5(4). *Cadmium(chronic) = $e^{(0.7977 \cdot \ln(\text{hardness}) - 3.909)} \cdot (1.101672 - \ln(\text{hardness}) \cdot 0.041838)$ *Iron(T)(chronic) = 3500(T) ug/L on unnamed tributary and 5900(T) ug/L on Dry Creek, see section 37.6(4)(c) for iron assessment locations. *Uranium(acute) = See 37.5(3) for details. *Uranium(chronic) = See 37.5(3) for details.	Temperature °C	CS-II	CS-II	Aluminum	---	---
	D.O. (mg/L)	---	5.0	Arsenic	340	---
	pH	6.5 - 9.0	---	Arsenic(T)	---	100
	chlorophyll a (mg/m ²)	---	---	Beryllium	---	---
	E. Coli (per 100 mL)	---	630	Cadmium	TVS	TVSSSE*
	Inorganic (mg/L)			Chromium III	TVS	TVS
	acute	chronic	Chromium III(T)	---	100	
	Ammonia	TVS	TVS	Chromium VI	TVS	TVS
	Boron	---	0.75	Copper	TVS	TVS
	Chloride	---	---	Iron(T)	---	varies*
	Chlorine	0.019	0.011	Lead	TVS	TVS
	Cyanide	0.005	---	Manganese	TVS	TVS
	Nitrate	100	---	Mercury(T)	---	0.01(†)
	Nitrite	--0.05-	0.05---	Molybdenum(T)	---	460150
	Phosphorus	---	0.11*	Nickel	TVS	TVS
Sulfate	---	---	Selenium	TVS	TVS	
Sulfide	---	0.002	Silver	TVS	TVS	
			Uranium	---	--varies*	
			Zinc	TVS	TVS	

4f. Mainstem of Dry Creek including all tributaries and wetlands from a point immediately above the Last Chance Ditch to the confluence with the Colorado River.						
COLCLC04F	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture Aq Life Cold 1 Recreation N	DM	MWAT		acute	chronic
Qualifiers:		acute	chronic			
Other: *Phosphorus(chronic) = applies only above the facilities listed at 37.5(4). *Uranium(acute) = See 37.5(3) for details. *Uranium(chronic) = See 37.5(3) for details.	Temperature °C	CS-II	CS-II	Aluminum	---	---
	D.O. (mg/L)	---	6.0	Arsenic	340	---
	pH	6.5 - 9.0	---	Arsenic(T)	---	7.6
	chlorophyll a (mg/m ²)	---	---	Beryllium	---	---
	E. Coli (per 100 mL)	---	630	Cadmium	TVS	TVS
	Inorganic (mg/L)			Chromium III	TVS	TVS
	acute	chronic	Chromium III(T)	---	100	
	Ammonia	TVS	TVS	Chromium VI	TVS	TVS
	Boron	---	0.75	Copper	TVS	TVS
	Chloride	---	---	Iron(T)	---	1000
	Chlorine	0.019	0.011	Lead	TVS	TVS
	Cyanide	0.005	---	Manganese	TVS	TVS
	Nitrate	100	---	Mercury(T)	---	0.01(†)
	Nitrite	--0.05-	0.05---	Molybdenum(T)	---	460150
	Phosphorus	---	0.11*	Nickel	TVS	TVS
Sulfate	---	---	Selenium	TVS	TVS	
Sulfide	---	0.002	Silver	TVS	TVS	
			Uranium	---	--varies*	
			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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Colorado River

5. All tributaries to the Colorado River, including wetlands, which are within the boundaries of White River National Forest, except for ~~the specific listing listings~~ in Segments 9a and 9c.

COLCLC05	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute		chronic	
Reviewable	Aq Life Cold 1 Recreation P Water Supply	Temperature °C	CS-I CS-I	Aluminum	---	---	
Qualifiers:		acute	chronic	Arsenic	340	---	
Other:		D.O. (mg/L)	---	6.0	Arsenic(T)	---	
Temporary Modification(s):		D.O. (spawning)	---	7.0	Beryllium	---	
Arsenic(chronic) = hybrid		pH	6.5 - 9.0	---	Cadmium	TVS(tr) TVS	
Expiration Date of 12/31/2021		chlorophyll a (mg/m ²)	---	150	Cadmium(T)	5.0 ---	
		E. Coli (per 100 mL)	---	205	Chromium III	---	
					Chromium III(T)	50 ---	
					Chromium VI	TVS TVS	
					Copper	TVS TVS	
					Iron	---	
					Iron(T)	---	
					Lead	TVS TVS	
					Lead(T)	50 ---	
					Manganese	TVS TVS/WS	
					Mercury(T)	---	
					Mercury(T)	---	
					Molybdenum(T)	---	
					Nickel	TVS TVS	
					Nickel(T)	---	
					Selenium	TVS TVS	
					Silver	TVS TVS(tr)	
					Uranium	---	
					Zinc	TVS TVS	

6. Mainstem of Oasis Creek including all tributaries and wetlands from the boundary of White River National Forest to the confluence with the Colorado River.

COLCLC06	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute		chronic	
Reviewable	Aq Life Cold 2 Recreation P Water Supply	Temperature °C	CS-I CS-I	Aluminum	---	---	
Qualifiers:		acute	chronic	Arsenic	340	---	
Other:		D.O. (mg/L)	---	6.0	Arsenic(T)	---	
Temporary Modification(s):		D.O. (spawning)	---	7.0	Beryllium	---	
Arsenic(chronic) = hybrid		pH	6.5 - 9.0	---	Cadmium	TVS(tr) TVS	
Expiration Date of 12/31/2021		chlorophyll a (mg/m ²)	---	150	Cadmium(T)	5.0 ---	
		E. Coli (per 100 mL)	---	205	Chromium III	---	
					Chromium III(T)	50 ---	
					Chromium VI	TVS TVS	
					Copper	TVS TVS	
					Iron	---	
					Iron(T)	---	
					Lead	TVS TVS	
					Lead(T)	50 ---	
					Manganese	TVS TVS/WS	
					Mercury(T)	---	
					Mercury(T)	---	
					Molybdenum(T)	---	
					Nickel	TVS TVS	
					Nickel(T)	---	
					Selenium	TVS TVS	
					Silver	TVS TVS(tr)	
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Colorado River

7a. Mainstem of Mitchell, Canyon, Elk, Garfield, Beaver, and Cache Creeks, including all tributaries and wetlands, from the boundary of the White River National Forest to their confluences with the Colorado River. ~~Battlement Creek from the most downstream boundary of BLM lands to the confluence with the Colorado River.~~

COLCLC07A	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/m ²)	---	150*	Cadmium(T)	5.0	---
Arsenic(chronic) = hybrid		E. Coli (per 100 mL)	---	126	Chromium III	---	TVS
Expiration Date of 12/31/2021		Inorganic (mg/L)			Chromium III(T)	50	---
			acute	chronic	Chromium VI	TVS	TVS
		Ammonia	TVS	TVS	Copper	TVS	TVS
		Boron	---	0.75	Iron	---	WS
		Chloride	---	250	Iron(T)	---	1000
		Chlorine	0.019	0.011	Lead	TVS	TVS
		Cyanide	0.005	---	Lead(T)	50	---
		Nitrate	10	---	Manganese	TVS	TVS/WS
		Nitrite	---0.05	0.05---	Mercury(T)	---	0.01(†)
		Phosphorus	---	0.11*	Molybdenum(T)	---	460150
		Sulfate	---	WS	Nickel	TVS	TVS
		Sulfide	---	0.002	Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	---	---varies*
					Zinc	TVS	TVS

7b. Mainstem of Divide Creek, including all tributaries and wetlands, from the boundary of the White River National Forest to the confluence with the Colorado River.

COLCLC07B	Classifications	Physical and Biological		Metals (ug/L)			
Designation	Agriculture	DM	MWAT	acute		chronic	
Reviewable	Aq Life Cold 1	Temperature °C	CS-II	CS-II	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/m ²)	---	150	Cadmium(T)	5.0	---
Arsenic(chronic) = hybrid		E. Coli (per 100 mL)	---	126	Chromium III	---	TVS
Expiration Date of 12/31/2021		Inorganic (mg/L)			Chromium III(T)	50	---
			acute	chronic	Chromium VI	TVS	TVS
		Ammonia	TVS	TVS	Copper	TVS	TVS
		Boron	---	0.75	Iron	---	WS
		Chloride	---	250	Iron(T)	---	1000
		Chlorine	0.019	0.011	Lead	TVS	TVS
		Cyanide	0.005	---	Lead(T)	50	---
		Nitrate	10	---	Manganese	TVS	TVS/WS
		Nitrite	---0.05	0.05---	Mercury(T)	---	0.01(†)
		Phosphorus	---	0.11	Molybdenum(T)	---	460150
		Sulfate	---	WS	Nickel	TVS	TVS
		Sulfide	---	0.002	Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	---	---varies*
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Colorado River

8. Mainstem of Northwater and Trapper Creeks, including all tributaries and wetlands, from their sources to the confluence with the East Middle Fork of Parachute Creek. East Middle Fork of Parachute Creek, including all tributaries and wetlands, from the source to the confluence with the Middle Fork of Parachute Creek.

COLCLC08	Classifications	Physical and Biological			Metals (ug/L)		
Designation			DM	MWAT		acute	chronic
OW	Agriculture						
	Aq Life Cold 1	Temperature °C	CS-I	CS-I	Aluminum	---	---
	Recreation P		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
		chlorophyll a (mg/m ²)	---	150	Cadmium(T)	5.0	---
		E. Coli (per 100 mL)	---	205	Chromium III	---	TVS
					Chromium III(T)	50	---
					Chromium VI	TVS	TVS
					Copper	TVS	TVS
					Iron	---	WS
					Iron(T)	---	1000
					Lead	TVS	TVS
					Lead(T)	50	---
					Manganese	TVS	TVS/WS
					Mercury(T)	---	0.01(†)
					Molybdenum(T)	---	460/150
					Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	---	---varies*
					Zinc	TVS	TVS
						varies*	---varies*

*Uranium(acute) = See 37.5(3) for details.
 *Uranium(chronic) = See 37.5(3) for details.

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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Colorado River

9a. Middle Rifle Creek, including all tributaries and wetlands, from its source to the confluence with West Rifle Creek. East Rifle Creek, including all tributaries and wetlands, from the source to the boundary of the White River National Forest.							
COLCLC09A	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute		chronic	
Reviewable	Aq Life Cold 1 Recreation E <u>Water Supply</u>	acute	chronic	Aluminum	---	---	
		Temperature °C	CS-I	CS-I	Arsenic	340	---
		D.O. (mg/L)	---	6.0	Arsenic(T)	---	7-60 02
Qualifiers:		D.O. (spawning)	---	7.0	Beryllium	---	---
Other:		pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS
		chlorophyll a (mg/m ²)	---	150	<u>Cadmium(T)</u>	<u>5.0</u>	---
		E. Coli (per 100 mL)	---	126	Chromium III	TVS ---	TVS
					Chromium III(T)	--- 50	100 ---
					Chromium VI	TVS	TVS
					Copper	TVS	TVS
					<u>Iron</u>	---	<u>WS</u>
					Iron(T)	---	1000
					Lead	TVS	TVS
					<u>Lead(T)</u>	<u>50</u>	---
					Manganese	TVS	TVS WS
					Mercury(T)	---	0.01(†)
					Molybdenum(T)	---	160 150
					Nickel	TVS	TVS
					<u>Nickel(T)</u>	---	<u>100</u>
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	---	--- varies*
					Zinc	TVS	TVS

*Uranium(acute) = See 37.5(3) for details.
 *Uranium(chronic) = See 37.5(3) for details.

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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Colorado River

9b. All lakes and reservoirs tributary to the Colorado River from the confluence of the Colorado and the Roaring Fork River to a point immediately below the confluence of the Colorado River and Parachute Creek, and all lakes and reservoirs within the White River National Forest or the Grand Mesa National Forest, except for the [specific listing listings](#) in segment 20.

COLCLC09B	Classifications	Physical and Biological		Metals (ug/L)		
Designation	Agriculture		DM	MWAT	acute	chronic
Reviewable	Aq Life Cold 1	Temperature °C	CL	CL	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)
chlorophyll a (ug/L)(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area.		chlorophyll a (ug/L)	---	8	Cadmium(T)	5.0
*Phosphorus(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area.		E. Coli (per 100 mL)	---	126	Chromium III	---
*Uranium(acute) = See 37.5(3) for details.					Chromium III(T)	50
*Uranium(chronic) = See 37.5(3) for details.					Chromium VI	TVS
					Chromium VI	TVS
					Copper	TVS
					Iron	---
					Iron(T)	---
					Lead	TVS
					Lead(T)	50
					Manganese	TVS
					Manganese	TVS
					Mercury(T)	---
					Mercury(T)	0.01(†)
					Molybdenum(T)	---
					Molybdenum(T)	460-150
					Nickel	TVS
					Nickel	TVS
					Nickel(T)	---
					Nickel(T)	100
					Selenium	TVS
					Selenium	TVS
					Silver	TVS
					Silver	TVS(tr)
					Uranium	---
					Uranium	varies*
					Uranium	--varies*
					Zinc	TVS
					Zinc	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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Lower Colorado River

9c. Battlement Creek, including all tributaries and wetlands, from the source to the most downstream boundary of BLM lands.						
COLCLC09C	Classifications	Physical and Biological			Metals (ug/L)	
Designation		DM	MWAT		acute	chronic
OW	Agriculture					
	Aq Life Cold 1	CS-I	CS-I	Aluminum	---	---
	Recreation E	acute	chronic	Arsenic	340	---
	Water Supply			Arsenic(T)	---	0.02
Qualifiers:		D.O. (mg/L)	---	6.0		
Other:		D.O. (spawning)	---	7.0	Beryllium	---
*Uranium(acute) = See 37.5(3) for details. *Uranium(chronic) = See 37.5(3) for details.		pH	6.5 - 9.0	---	Cadmium	TVS(tr)
		chlorophyll a (mg/m ²)	---	150	Cadmium(T)	5.0
		E. Coli (per 100 mL)	---	126	Chromium III	---
		Inorganic (mg/L)			Chromium III(T)	50
			acute	chronic	Chromium VI	TVS
		Ammonia	TVS	TVS	Copper	TVS
		Boron	---	0.75	Iron	---
		Chloride	---	250	Iron(T)	---
		Chlorine	0.019	0.011	Lead	TVS
		Cyanide	0.005	---	Lead(T)	50
		Nitrate	10	---	Manganese	TVS
		Nitrite	---0.05	0.05---	Mercury(T)	---
		Phosphorus	---	0.11	Molybdenum(T)	---
		Sulfate	---	WS	Nickel	TVS
		Sulfide	---	0.002	Nickel(T)	---
					Selenium	TVS
					Silver	TVS
					Uranium	---
					Zinc	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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Lower Colorado River

9d. Battlement Creek, including all tributaries and wetlands, from the most downstream boundary of BLM lands to the confluence with the Colorado River.						
COLCLC09D	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT		acute	chronic
Reviewable	Aq Life Cold 1	CS-I	CS-I	Temperature °C	340	---
	Recreation E	acute	chronic	Arsenic	---	0.02
	Water Supply			Arsenic(T)	---	0.02
Qualifiers:				D.O. (mg/L)	---	6.0
				D.O. (spawning)	---	7.0
Other:				pH	6.5 - 9.0	---
				chlorophyll a (mg/m ²)	---	150
				E. Coli (per 100 mL)	---	126
				Inorganic (mg/L)		
		acute	chronic	Iron	---	WS
				Iron(T)	---	1000
				Ammonia	TVS	TVS
				Boron	---	0.75
				Chloride	---	250
				Chlorine	0.019	0.011
				Cyanide	0.005	---
				Nitrate	10	---
				Nitrite	0.05	---
				Phosphorus	---	0.11
				Sulfate	---	WS
				Sulfide	---	0.002
				Lead	TVS	TVS
				Lead(T)	50	---
				Manganese	TVS	TVS/WS
				Mercury(T)	---	0.01
				Molybdenum(T)	---	150
				Nickel	TVS	TVS
				Nickel(T)	---	100
				Selenium	TVS	TVS
				Silver	TVS	TVS(tr)
				Uranium	varies*	varies*
				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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Colorado River

10. West Rifle Creek, including all tributaries and wetlands, from the source to Rifle Gap Reservoir. East Rifle Creek, including all tributaries and wetlands, from the White River National Forest boundary to Rifle Gap Reservoir. Rifle Creek, including all tributaries and wetlands, from Rifle Gap Reservoir to the confluence with the Colorado River.							
COLCLC10	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture Aq Life Cold 1 Recreation E Water Supply	DM	MWAT	acute chronic			
Reviewable		acute	chronic	Aluminum	---	---	
		CS-II	CS-II	Arsenic	340	---	
		Temperature °C			Arsenic(T)	---	
		---	6.0		Beryllium	---	
		D.O. (mg/L)			Cadmium	TVS(tr) TVS	
		---	7.0		Cadmium(T)	<u>5.0</u> ---	
		D.O. (spawning)			Chromium III	---	
		6.5 - 9.0	---		Chromium III(T)	50 ---	
		pH			Chromium VI	TVS TVS	
		chlorophyll a (mg/m ²)			Copper	TVS TVS	
		---	150		Iron	---	
		E. Coli (per 100 mL)			Iron(T)	---	
		---	126		Lead	TVS TVS	
		Inorganic (mg/L)				Lead(T)	<u>50</u> ---
		acute	chronic		Manganese	TVS TVS/WS	
		TVS	TVS		Mercury(T)	---	
		---	0.75		Mercury(T)	---	
		---	250		Molybdenum(T)	---	
		0.019	0.011		Nickel	TVS TVS	
		0.005	---		Nickel(T)	---	
		10	---		Selenium	TVS TVS	
		---	0.11		Silver	TVS TVS(tr)	
		<u>0.05</u>	<u>0.05</u>		Uranium	---	
		---	0.11		Zinc	TVS TVS	
		---	WS				
		---	0.002				

Qualifiers:

Other:

Temporary Modification(s):
Arsenic(chronic) = hybrid
Expiration Date of 12/31/2021

*Uranium(acute) = See 37.5(3) for details.
*Uranium(chronic) = See 37.5(3) for details.

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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Colorado River

11d. Mainstem of Middle Fork of Parachute Creek from the confluence with East Middle Fork to a point immediately above the confluence with the West Fork of Parachute Creek.						
COLCLC11D	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	acute		chronic
Reviewable	Aq-Life Cold-1 Recreation-N	Temperature °C	CS-I	CS-I	Aluminum	---
Qualifiers:		acute	chronic	Arsenic	340	---
Other:		D.O. (mg/L)	---	6.0	Arsenic(T)	---
		D.O. (spawning)	---	7.0	Beryllium	---
		pH	6.5-9.0	---	Cadmium	TVS(tr)
		chlorophyll a (mg/m ²)	---	---	Chromium III	TVS
		E.-Coli (per 100 mL)	---	630	Chromium III(T)	---
					Chromium VI	TVS
		Inorganic (mg/L)			Copper	TVS
		acute	chronic	Iron(T)	---	1000
		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	TVS
		Sulfide	---	0.002		TVS
11e. That portion of the mainstem of the East Fork of Parachute Creek, including all tributaries and wetlands, within Sections 27, 28, and 29, T5S, R95W.						
COLCLC11E	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	acute		chronic
Reviewable	Aq-Life Cold-2 Recreation-N Water-Supply	Temperature °C	CS-I	CS-I	Aluminum	---
Qualifiers:		acute	chronic	Arsenic(T)	---	0.02-10 ^A
Other:		D.O. (mg/L)	---	6.0	Beryllium(T)	4.0
		D.O. (spawning)	---	7.0	Cadmium(T)	5.0
		pH	6.5-9.0	---	Chromium III(T)	50
		chlorophyll a (mg/m ²)	---	---	Chromium VI(T)	---
		E.-Coli (per 100 mL)	---	630	Copper(T)	---
					Iron	---
		Inorganic (mg/L)			Lead(T)	50
		acute	chronic	Manganese	---	WS
		Ammonia	---	---	Manganese(T)	---
		Boron	---	0.75	Mercury	---
		Chloride	---	250	Molybdenum(T)	---
		Chlorine	---	---	Nickel(T)	---
		Cyanide	0.2	---	Selenium(T)	---
		Nitrate	10	---	Silver(T)	100
		Nitrite	---	1.0	Uranium	---
		Phosphorus	---	0.11	Zinc(T)	---
		Sulfate	---	WS		2000
		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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Lower Colorado River

11f. Mainstem of the East Fork of Parachute Creek from the west boundary line of S29, T5S, R95W to the confluence with Middle Fork of Parachute Creek.						
COLCLC11F	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT		acute	chronic
Reviewable	Aq-Life Cold-1 Recreation-N Water-Supply	CS-I	CS-I	Aluminum	---	---
Qualifiers:		acute	chronic	Arsenic	340	---
Other:		D.O. (mg/L)	6.0	Arsenic(T)	---	0.02
		D.O. (spawning)	7.0	Beryllium	---	---
		pH	6.5-9.0	Cadmium	TVS(tr)	TVS
		chlorophyll a (mg/m ²)	---	Chromium-III	---	TVS
		E.-Coli (per 100 mL)	630	Chromium-III(T)	50	---
		Inorganic (mg/L)		Chromium-VI	TVS	TVS
		acute	chronic	Copper	TVS	TVS
		Ammonia	TVS	TVS	Iron	WS
		Boron	---	0.75	Iron(T)	---
		Chloride	---	250	Lead	TVS
		Chlorine	0.019	0.011	Manganese	TVS
		Cyanide	0.005	---	TVS/WS	TVS/WS
		Nitrate	10	---	Mercury	---
		Nitrite	---	0.05	Molybdenum(T)	---
		Phosphorus	---	0.11	Nickel	TVS
		Sulfate	---	WS	Selenium	TVS
		Sulfide	---	0.002	Silver	TVS
					TVS(tr)	TVS(tr)
					Uranium	---
					Zinc	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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Lower Colorado River

~~14h11c~~ Mainstem of Parachute Creek, ~~including all tributaries and wetlands~~, from the confluence of the West and East Forks to the confluence with the Colorado River ~~except for specific listings in segment 14g~~. All tributaries and wetlands to Parachute Creek on the west side of Parachute Creek from the confluence to the East and West Forks to the confluence with the Colorado River.

COLCLC14H <u>COLCLC11C</u>		Classifications			Physical and Biological			Metals (ug/L)		
Designation			DM	MWAT		acute	chronic		acute	chronic
Reviewable	Agriculture				Temperature °C	CS-II	CS-II	Aluminum	---	---
	Aq Life Cold 1							Arsenic	340	0.02---
	Recreation P							Beryllium Arsenic(T)	---	---0.02
	Water Supply				D.O. (mg/L)	---	6.0	Cadmium	TVS(tr)	TVS
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/m ²)	---	150	Chromium III(T)	50	---
Arsenic(chronic) = hybrid					E. Coli (per 100 mL)	---	205	Chromium VI	TVS	TVS
Expiration Date of 12/31/2021					Inorganic (mg/L)			Copper	TVS	TVS
<u>*Uranium(acute) = See 37.5(3) for details.</u>								Iron	---	WS
<u>*Uranium(chronic) = See 37.5(3) for details.</u>								Iron(T)	---	1000
								Lead	TVS	TVS
					Ammonia	TVS	TVS	Lead(T)	50	---
					Boron	---	0.75	Manganese	TVS	TVS/WS
					Chloride	---	250	Mercury(T)	---	0.01(†)
					Chlorine	0.019	0.011	Molybdenum(T)	---	160150
					Cyanide	0.005	---	Nickel	TVS	TVS
					Nitrate	10	---	Nickel(T)	---	100
					Nitrite	---0.05	0.05---	Selenium	TVS	TVS
					Phosphorus	---	0.11	Silver	TVS	TVS(tr)
					Sulfate	---	WS	Uranium	---	---varies*
					Sulfide	---	0.002	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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Lower Colorado River

12a. All tributaries to East Fork Parachute Creek from its source to a point immediately below the mouth of First Anvil Creek:							
COLCLC12A	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture		DM	MWAT		acute	chronic
Reviewable	Aq-Life Cold-1 Recreation-N	Temperature °C	CS-I	CS-I	Aluminum	--	--
Qualifiers:			acute	chronic	Arsenic	340	--
Other:		D.O. (mg/L)	--	6.0	Arsenic(T)	--	7.6
		D.O. (spawning)	--	7.0	Beryllium	--	--
		pH	6.5-9.0	--	Cadmium	TVS(tr)	TVS
		chlorophyll a (mg/m ²)	--	--	Chromium III	TVS	TVS
		E.-Coli (per 100 mL)	--	630	Chromium III(T)	--	100
		Inorganic (mg/L)			Chromium VI	TVS	TVS
			acute	chronic	Copper	TVS	TVS
		Ammonia	TVS	TVS	Iron(T)	--	1000
		Boron	--	0.75	Lead	TVS	TVS
		Chloride	--	--	Manganese	TVS	TVS
		Chlorine	0.019	0.011	Mercury	--	0.01(t)
		Cyanide	0.005	--	Molybdenum(T)	--	160
		Nitrate	100	--	Nickel	TVS	TVS
		Nitrite	--	0.05	Selenium	TVS	TVS
		Phosphorus	--	0.11	Silver	TVS	TVS(tr)
		Sulfate	--	--	Uranium	--	--
		Sulfide	--	0.002	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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Lower Colorado River

12a. All tributaries to the Colorado River on the north side of the Colorado River from below Cottonwood Creek to the confluence with Parachute Creek except for listings in [Segments 9c and 9d](#).

COLCLC12A	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture		DM	MWAT		acute	chronic
Reviewable	Aq Life Cold 2	Temperature °C	CS-I	CS-I	Arsenic	340	---
	Recreation N		acute	chronic	Arsenic(T)	---	100
Qualifiers:		D.O. (mg/L)	---	5.0	Cadmium	TVS	TVS
Other:		pH	6.5 - 9.0	---	Chromium III	TVS	TVS
		chlorophyll a (mg/m²)	---	---	Chromium III(T)	---	100
		E. Coli (per 100 mL)	---	630	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(T)	---	0.01
		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
		Phosphorus	---	0.11	Uranium	varies*	varies*
		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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Colorado River

12b. All tributaries and wetlands to the Colorado River from a point immediately below the confluence of Parachute Creek to a point immediately below the confluence with Roan Creek, except for the specific listings in segments 5, 12c, 14a, 14b and 14c.

COLCLC12B	Classifications	Physical and Biological			Metals (ug/L)		
Designation			DM	MWAT		acute	chronic
Reviewable	Agriculture		CS-II	CS-II	Aluminum	---	---
	Aq Life Cold 2	Temperature °C			Arsenic	340	---
	Recreation P		acute	chronic	Arsenic(T)	---	0.02-10 ^A
	Water Supply	D.O. (mg/L)	---	6.0	Beryllium	---	---
Qualifiers:		D.O. (spawning)	---	7.0	Cadmium	TVS(tr)	TVS
Other:		pH	6.5 - 9.0	---	Cadmium(T)	5.0	---
		chlorophyll a (mg/m ²)	---	150	Chromium III	---	TVS
		E. Coli (per 100 mL)	---	205	Chromium III(T)	50	---
					Chromium VI	TVS	TVS
					Copper	TVS	TVS
					Iron	---	WS
					Iron(T)	---	1000
					Lead	TVS	TVS
					Lead(T)	50	---
					Manganese	TVS	TVS/WS
					Mercury(T)	---	0.01(†)
					Molybdenum(T)	---	160-150
					Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	---	---varies*
					Zinc	TVS	TVS

*Uranium(acute) = See 37.5(3) for details.
 *Uranium(chronic) = See 37.5(3) for details.

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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Lower Colorado River

13c. Walker Wildlife Area Ponds.							
COLCLC13C	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture		DM	MWAT		acute	chronic
Reviewable	Aq Life Warm 1 Recreation E	Temperature °C	WL	WL	Aluminum	---	---
Qualifiers:			acute	chronic	Arsenic	340	---
Other:		D.O. (mg/L)	---	5.0	Arsenic(T)	---	7.6
*chlorophyll a (ug/L)(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area.		pH	6.5 - 9.0	---	Beryllium	---	---
Phosphorus(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area.		chlorophyll a (ug/L)	---	20	Cadmium	TVS	TVS
*Uranium(acute) = See 37.5(3) for details.		E. Coli (per 100 mL)	---	126	Chromium III	TVS	TVS
*Uranium(chronic) = See 37.5(3) for details.		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(T)	---	0.01(†)
		Nitrate	100	---	Molybdenum(T)	---	460 150
		Nitrite	0.05	0.05	Nickel	TVS	TVS
		Phosphorus	---	0.083*	Selenium	TVS	TVS
		Sulfate	---	---	Silver	TVS	TVS
		Sulfide	---	0.002	Uranium	---	---varies*
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Lower Colorado River

13d. Coal Canyon Creek downgradient of the Government Highline Canal						
COLCLC13D	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	acute	chronic	
Reviewable	Aq Life Warm 2 Recreation P	Temperature °C	WS-II WS-II	Aluminum	=	=
Qualifiers:		acute	chronic	Arsenic	340	=
Other: *Copper(acute) = 0.96e^(0.9801 [ln(hard)] - 1.4747) *Copper(chronic) = 0.96e^(0.5897 [ln(hard)] - 0.3193)	D.O. (mg/L)	=	5.0	Arsenic(T)	=	100
	pH	6.5-9.0	=	Beryllium	=	=
	chlorophyll a (mg/m ²)	=	150	Cadmium	TVS	TVS
	E. Celi (per 100 mL)	=	205	Chromium III	TVS	TVS
	Inorganic (mg/L)			Chromium III(T)	=	100
		acute	chronic	Chromium VI	TVS	TVS
	Ammonia	TVS	TVS	Copper	=	SSE*
	Boron	=	5.0	Copper	SSE*	=
	Chloride	=	=	Iron	=	1000
	Chlorine	0.019	0.011	Lead	TVS	TVS
	Cyanide	0.005	=	Manganese	TVS	TVS
	Nitrate	100	=	Mercury	=	0.01(t)
	Nitrite	=	10	Molybdenum(T)	=	160
	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
 sc = sculpin

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

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Lower Colorado River

<u>13d. Deleted.</u>				
COLCLC13D	Classifications	Physical and Biological		Metals (ug/L)
<u>Designation</u>		<u>DM</u>	<u>MWAT</u>	<u>acute</u> <u>chronic</u>
Qualifiers:		<u>acute</u>	<u>chronic</u>	
Other:		<u>Inorganic (mg/L)</u>		
		<u>acute</u>	<u>chronic</u>	

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 further details on applied standards for details on TVS, TVS\(tr\), TVS\(sc\), WS, temperature standards.](#)

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Colorado River

14a. Mainstem of Roan Creek, including all wetlands and tributaries, from its source to a point immediately above the confluence with Clear Creek, except for the <u>specific</u> -listing in segment 14b. Clear Creek, including all tributaries and wetlands, from the source to a point immediately below the confluence with Tom Creek.							
COLCLC14A	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 P		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
		chlorophyll a (mg/m ²)	---	150	Cadmium(T)	<u>5.0</u>	---
		E. Coli (per 100 mL)	---	205	Chromium III	---	TVS
					Chromium III(T)	50	---
					Chromium VI	TVS	TVS
					Copper	TVS	TVS
					Iron	---	WS
					Iron(T)	---	1000
					Lead	TVS	TVS
					Lead(T)	<u>50</u>	---
					Manganese	TVS	TVS/WS
					Mercury(T)	---	0.01(†)
					Molybdenum(T)	---	460 <u>150</u>
					Nickel	TVS	TVS
					Nickel(T)	---	<u>100</u>
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	---	---varies*
						<u>varies*</u>	
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Colorado River

14b. Clear Creek, including all tributaries and wetlands, from a point immediately below the confluence with Tom Creek to the confluence with Roan Creek. Roan Creek, including all tributaries and wetlands, from a point immediately above the confluence with Clear Creek to a point immediately below the confluence with Kimball Creek.

COLCLC14B	Classifications	Physical and Biological			Metals (ug/L)		
			DM	MWAT		acute	chronic
Designation	Agriculture						
	Aq Life Cold 1	Temperature °C	CS-II	CS-II	Aluminum	---	---
	Recreation <u>PE</u>		acute	chronic	Arsenic	340	---
Reviewable	Water Supply	D.O. (mg/L)	---	6.0	Arsenic(T)	---	0.02
		D.O. (spawning)	---	7.0	Beryllium	---	---
Qualifiers:		pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS
Other:		chlorophyll a (mg/m ²)	---	150	Cadmium(T)	<u>5.0</u>	---
Temporary Modification(s):		E. Coli (per 100 mL)	---	<u>205126</u>	Chromium III	---	TVS
Arsenic(chronic) = hybrid					Chromium III(T)	50	---
Expiration Date of 12/31/2021					Chromium VI	TVS	TVS
*Uranium(acute) = See 37.5(3) for details.		Inorganic (mg/L)			Copper	TVS	TVS
*Uranium(chronic) = See 37.5(3) for details.			acute	chronic	Iron	---	WS
		Ammonia	TVS	TVS	Iron(T)	---	1000
		Boron	---	0.75	Lead	TVS	TVS
		Chloride	---	250	Lead(T)	<u>50</u>	---
		Chlorine	0.019	0.011	Manganese	TVS	TVSWS
		Cyanide	0.005	---	Mercury(T)	---	0.01(†)
		Nitrate	10	---	Molybdenum(T)	---	<u>160150</u>
		Nitrite	<u>---0.05</u>	<u>0.05---</u>	Nickel	TVS	TVS
		Phosphorus	---	0.11	Nickel(T)	---	<u>100</u>
		Sulfate	---	WS	Selenium	TVS	TVS
		Sulfide	---	0.002	Silver	TVS	TVS(tr)
					Uranium	---	<u>varies*</u>
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Lower Colorado River

14c. Mainstem of Roan Creek, including all tributaries and wetlands, from a point immediately below the confluence with Kimball Creek to the confluence with the Colorado River.							
COLCLC14C	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture		DM	MWAT			
Reviewable	Aq Life Warm 1 Recreation <u>PE</u> Water Supply	Temperature °C	WS-II	WS-II			
			acute	chronic		acute	chronic
Qualifiers:		D.O. (mg/L)	---	5.0	Arsenic	---	---
		pH	6.5 - 9.0	---	Arsenic(T)	---	0.02
Other:		chlorophyll a (mg/m ²)	---	150	<u>Beryllium</u>	---	---
Temporary Modification(s):		E. Coli (per 100 mL)	---	<u>205126</u>	Cadmium	TVS	TVS
Arsenic(chronic) = hybrid		Inorganic (mg/L)			Cadmium(T)	<u>5.0</u>	---
Expiration Date of 12/31/2021			acute	chronic	Chromium III	---	TVS
<u>*Uranium(acute) = See 37.5(3) for details.</u>		Ammonia	TVS	TVS	Chromium III(T)	50	---
<u>*Uranium(chronic) = See 37.5(3) for details.</u>		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	<u>---0.05</u>	<u>0.05---</u>	<u>Lead(T)</u>	<u>50</u>	<u>---</u>
		Phosphorus	---	0.17	Manganese	TVS	TVSWS
		Sulfate	---	WS	Mercury(T)	---	0.01(†)
		Sulfide	---	0.002	Molybdenum(T)	---	<u>460150</u>
					Nickel	TVS	TVS
					<u>Nickel(T)</u>	<u>---</u>	<u>100</u>
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	<u>---</u>	<u>---varies*</u>
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Colorado River

15a. Mainstem of Plateau Creek from its source to the inlet of Vega Reservoir. All tributaries and wetlands to Plateau Creek from its source to a point immediately above the confluence with Buzzard Creek. Kimball Creek, Grove Creek, Big Creek, Cottonwood Creek, Bull Creek, Spring Creek, Coon Creek, and Mesa Creek, including all wetlands and tributaries, from their sources to their confluences with Plateau Creek. The mainstem of Buzzard Creek, including all tributaries and wetlands, within the Grand Mesa National Forest.

COLCLC15A	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/m ²)	---	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	---
*chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 37.5(4).					Chromium VI	TVS	TVS
*Phosphorus(chronic) = applies only above the facilities listed at 37.5(4).					Copper	TVS	TVS
*Uranium(acute) = See 37.5(3) for details.					Iron	---	WS
*Uranium(chronic) = See 37.5(3) for details.					Iron(T)	---	1000
					Lead	TVS	TVS
					Lead(T)	50	---
					Manganese	TVS	TVS/WS
					Mercury(T)	---	0.01(†)
					Molybdenum(T)	---	160-150
					Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	varies*	--varies*
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Colorado River

15b. All tributaries and wetlands to Buzzard Creek from the Grand Mesa National Forest boundary to the confluence with Plateau Creek.							
COLCLC15B	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute chronic			
Reviewable	Aq Life Cold 1 Recreation E Water Supply	Temperature °C	CS-II	CS-II	Aluminum	--- ---	
		acute	chronic		Arsenic	340 ---	
Qualifiers: Other: Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2021 <u>*Uranium(acute) = See 37.5(3) for details.</u> <u>*Uranium(chronic) = See 37.5(3) for details.</u>		D.O. (mg/L)	---	6.0	Arsenic(T)	--- 0.02	
		D.O. (spawning)	---	7.0	Beryllium	--- ---	
		pH	6.5 - 9.0	---	Cadmium	TVS(tr) TVS	
		chlorophyll a (mg/m ²)	---	150	Cadmium(T)	5.0 ---	
		E. Coli (per 100 mL)	---	126	Chromium III	--- TVS	
		Inorganic (mg/L)				Chromium III(T)	50 ---
						Chromium VI	TVS TVS
						acute	chronic
		Ammonia	TVS	TVS	Copper	TVS TVS	
		Boron	---	0.75	Iron	--- WS	
		Chloride	---	250	Iron(T)	--- 1000	
		Chlorine	0.019	0.011	Lead	TVS TVS	
		Cyanide	0.005	---	Lead(T)	50 ---	
		Nitrate	10	---	Manganese	TVS TVS/WS	
		Nitrite	--0.05-	0.05---	Mercury(T)	--- 0.01(†)	
Phosphorus	---	0.11	Molybdenum(T)	--- 460150			
Sulfate	---	WS	Nickel	TVS TVS			
Sulfide	---	0.002	Nickel(T)	--- 100			
				Selenium	TVS TVS		
				Silver	TVS TVS(tr)		
				Uranium	--- --varies*		
				Zinc	TVS TVS		

15c. Mainstem of Plateau Creek from the outlet of Vega Reservoir to a point immediately below the confluence with Buzzard Creek.							
COLCLC15C	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute chronic			
Reviewable	Aq Life Cold 1 Recreation E Water Supply	Temperature °C	15.7varies*	11.2varies*	Aluminum	--- ---	
		acute	chronic		Arsenic	340 ---	
Qualifiers: Other: Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2021 *chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 37.5(4). *Phosphorus(chronic) = applies only above the facilities listed at 37.5(4). <u>*Uranium(acute) = See 37.5(3) for details.</u> <u>*Uranium(chronic) = See 37.5(3) for details.</u> *Temperature = DM=15.7 and MWAT=11.2 from 10/1-10/31 DM=14.1 and MWAT=CS-II from 11/1-3/31 DM=27.3 and MWAT=21.6 from 4/1-9/30		D.O. (mg/L)	---	6.0	Arsenic(T)	--- 0.02	
		D.O. (spawning)	---	7.0	Beryllium	--- ---	
		pH	6.5 - 9.0	---	Cadmium	TVS(tr) TVS	
		chlorophyll a (mg/m ²)	---	150*	Cadmium(T)	5.0 ---	
		E. Coli (per 100 mL)	---	126	Chromium III	--- TVS	
		Inorganic (mg/L)				Chromium III(T)	50 ---
						Chromium VI	TVS TVS
						acute	chronic
		Ammonia	TVS	TVS	Copper	TVS TVS	
		Boron	---	0.75	Iron	--- WS	
		Chloride	---	250	Iron(T)	--- 1000	
		Chlorine	0.019	0.011	Lead	TVS TVS	
		Cyanide	0.005	---	Lead(T)	50 ---	
		Nitrate	10	---	Manganese	TVS TVS/WS	
		Nitrite	--0.05-	0.05---	Mercury(T)	--- 0.01(†)	
Phosphorus	---	0.11*	Molybdenum(T)	--- 460150			
Sulfate	---	WS	Nickel	TVS TVS			
Sulfide	---	0.002	Nickel(T)	--- 100			
				Selenium	TVS TVS		
				Silver	TVS TVS(tr)		
				Uranium	--- --varies*		
				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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Lower Colorado River

17a. ~~Mainstem~~ of Rapid Creek, including all tributaries and wetlands, from its source to ~~a point immediately~~ below the confluence with Cottonwood Creek (39.130512, -108.301028), including Kruzen Springs.

COLCLC17A	Classifications	Physical and Biological			Metals (ug/L)		
Designation			DM	MWAT		acute	chronic
OW	Agriculture		CS-II	CS-II	Aluminum	---	---
	Aq Life Cold 1	Temperature °C			Arsenic	340	---
	Recreation P		acute	chronic	Arsenic(T)	---	0.02
	Water Supply	D.O. (mg/L)	---	6.0	Beryllium	---	---
Qualifiers:		D.O. (spawning)	---	7.0	Cadmium	TVS(tr)	TVS
Other:		pH	6.5 - 9.0	---	Cadmium(T)	5.0	---
Temporary Modification(s):		chlorophyll a (mg/m ²)	---	150	Chromium III	---	TVS
Arsenic(chronic) = hybrid		E. Coli (per 100 mL)	---	205	Chromium III(T)	50	---
Expiration Date of 12/31/2021					Chromium VI	TVS	TVS
					Copper	TVS	TVS
					Iron	---	WS
					Iron(T)	---	1000
					Lead	TVS	TVS
					Lead(T)	50	---
					Manganese	TVS	TVS/WS
					Mercury(T)	---	0.01(†)
					Molybdenum(T)	---	460/150
					Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	---	---varies*
					Zinc	TVS	TVS

*Uranium(acute) = See 37.5(3) for details.
*Uranium(chronic) = See 37.5(3) for details.

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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Colorado River

COLCLC17B		Physical and Biological			Metals (ug/L)		
Designation	Classifications	DM	MWAT		acute	chronic	
Reviewable	Agriculture			Temperature °C	Aluminum	---	---
	Aq Life Cold 1	CS-II	CS-II		Arsenic	340	---
	Recreation P	acute	chronic	D.O. (mg/L)	Arsenic(T)	---	0.02
	Water Supply	---	6.0	D.O. (spawning)	Beryllium	---	---
Qualifiers:			7.0	pH	Cadmium	TVS(tr)	TVS
Other:		6.5 - 9.0	---	chlorophyll a (mg/m ²)	Cadmium(T)	5.0	---
Temporary Modification(s):		---	150	E. Coli (per 100 mL)	Chromium III	---	TVS
Arsenic(chronic) = hybrid		---	205		Chromium III(T)	50	---
Expiration Date of 12/31/2021		Inorganic (mg/L)			Chromium VI	TVS	TVS
*Uranium(acute) = See 37.5(3) for details.		acute	chronic		Copper	TVS	TVS
*Uranium(chronic) = See 37.5(3) for details.				Ammonia	Iron	---	WS
		TVS	TVS	Boron	Iron(T)	---	1000
		---	0.75	Chloride	Lead	TVS	TVS
		---	250	Chlorine	Lead(T)	50	---
		0.019	0.011	Cyanide	Manganese	TVS	TVSWS
		0.005	---	Nitrate	Mercury(T)	---	0.01(†)
		10	---	Nitrite	Molybdenum(T)	---	160/150
		---	0.11	Phosphorus	Nickel	TVS	TVS
		---	WS	Sulfate	Nickel(T)	---	100
		---	0.002	Sulfide	Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	---	---varies*
					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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Lower Colorado River

20. Rifle Gap Reservoir, Harvey Gap Reservoir, and Vega Reservoir.										
COLCLC20	Classifications	Physical and Biological			Metals (ug/L)					
Designation		DM	MWAT		acute	chronic				
Reviewable	Agriculture									
	Aq Life Cold 1	Temperature °C	4/1-12/31 GLLvaries*	21.5varies* ^B	Aluminum	---	---			
	Recreation E	Temperature °C	4/1-12/31 CLL*	23* ^B	Arsenic	340	---			
	Water Supply	Temperature °C	CLL	CLL	Arsenic(T)	---	0.02			
Qualifiers:			acute	chronic						
Other:		D.O. (mg/L)	---	6.0	Beryllium	---	---			
*chlorophyll a (ug/L)(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area. *Phosphorus(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area. *Temperature(4/1-12/31) = Vega Reservoir (MWAT=21.5)*Uranium(acute) = See 37.5(3) for details. *Uranium(chronic) = See 37.5(3) for details. *Temperature(= DM and MWAT=CLL from 1/1-3/31 Vega Reservoir DM=CLL and MWAT=21.5 from 4/1--12/31) = Rifle Gap Reservoir (DM=CLL and MWAT=23) from 4/1-12/31 All others DM and MWAT=CLL from 4/1-12/31		D.O. (spawning)	---	7.0	Cadmium	TVS(tr)	TVS			
		pH	6.5 - 9.0	---	Cadmium(T)	5.0	---			
		chlorophyll a (ug/L)	---	8*	Chromium III	---	TVS			
		E. Coli (per 100 mL)	---	126	Chromium III(T)	50	---			
					Chromium VI	TVS	TVS			
					Copper	TVS	TVS			
					Inorganic (mg/L)		Iron	---	WS	
					acute	chronic	Iron(T)	---	1000	
					Ammonia	TVS	TVS	Lead	TVS	TVS
					Boron	---	0.75	Lead(T)	50	---
			Chloride	---	250	Manganese	TVS	TVS/WS		
			Chlorine	0.019	0.011	Mercury(T)	---	0.01(t)		
			Cyanide	0.005	---	Molybdenum(T)	---	160150		
			Nitrate	10	---	Nickel	TVS	TVS		
			Nitrite	0.05	0.05	Nickel(T)	---	100		
			Phosphorus	---	0.025*	Selenium	TVS	TVS		
			Sulfate	---	WS	Silver	TVS	TVS(tr)		
			Sulfide	---	0.002	Uranium	varies*	varies*		
						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 further details on applied standards for details on TVS, TVS(tr), TVS(sc), WS, temperature standards.

REGULATION #37 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower Colorado River

21. All lakes and reservoirs tributary to Roan Creek from the source to a point just below the confluence with Clear Creek. All lakes and reservoirs tributary to Rapid Creek from the source to the confluence with the Colorado River. All lakes and reservoirs tributary to the Little Dolores River from the source to a point immediately below the confluence with Hay Press Creek. All lakes and reservoirs tributary to Plateau Creek and within the Grand Mesa National Forest.

COLCLC21	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture		DM	MWAT		acute	chronic
Reviewable	Aq Life Cold 1 <u>DUWS*</u>	Temperature °C	CL	CL	Aluminum	---	---
	Recreation U		acute	chronic	Arsenic	340	---
	Water Supply <u>DUWS*</u>	D.O. (mg/L)	---	6.0	Arsenic(T)	---	0.02
		D.O. (spawning)	---	7.0	Beryllium	---	---
		pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS
Qualifiers:		chlorophyll a (ug/L)	---	8*	<u>Cadmium(T)</u>	<u>5.0</u>	---
Other:		E. Coli (per 100 mL)	---	126	Chromium III	---	TVS
					Chromium III(T)	50	---
					Inorganic (mg/L)		
			acute	chronic	Chromium VI	TVS	TVS
		Ammonia	TVS	TVS	Copper	TVS	TVS
		Boron	---	0.75	Iron	---	WS
		Chloride	---	250	Iron(T)	---	1000
		Chlorine	0.019	0.011	Lead	TVS	TVS
		Cyanide	0.005	---	<u>Lead(T)</u>	<u>50</u>	---
		Nitrate	10	---	Manganese	TVS	TVS/WS
		Nitrite	0.05	0.05	Mercury(T)	---	0.01(4)
		Phosphorus	---	0.025*	Molybdenum(T)	---	160 <u>150</u>
		Sulfate	---	WS	Nickel	TVS	TVS
		Sulfide	---	0.002	<u>Nickel(T)</u>	---	<u>100</u>
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	---	---
						<u>varies*</u>	<u>---varies*</u>
					Zinc	TVS	TVS

*chlorophyll a (ug/L)(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area.
 *Classification: Jerry Creek Reservoir Number 1 and Number 2 = DUWS, Palisade Cabin Reservoir = DUWS
 *Phosphorus(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area.
*Uranium(acute) = See 37.5(3) for details.
*Uranium(chronic) = See 37.5(3) for details.

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 further details on applied standards 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

City of Steamboat Springs

Draft Proposed

Regulation #33

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; JUNE 10, 2019 RULEMAKING; FINAL ACTION AUGUST XX, 2019; EFFECTIVE DATE DECEMBER 31, 2019

The provisions of C.R.S. sections 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

YAMPA RIVER BASIN SEGMENT 02B (YAMPA RIVER):

The Commission adopted a temporary modification of the temperature standard for segment COUCYA02b based on significant uncertainty regarding both the appropriate long-term underlying temperature standards and the extent to which existing temperatures are the result of natural or irreversible anthropogenic conditions. The City of Steamboat Springs (the City) provided evidence demonstrating an existing in-stream compliance problem throughout the entirety of Segment 02b, as well as a predicted compliance problem at the City's wastewater treatment facility (WWTF) which discharges directly to Segment 02b. The temporary modification will expire on 12/31/2024, and will be set to "current conditions" for both acute and chronic. During the term of the temporary modification the City will continue to work towards implementing its portions of the Yampa River Stream Health Assessment and Streamflow Management Plan to research the effects of streamflow, and other variables (i.e. shading, climate change) on the temperature of Segment 02b. The City will encourage Colorado Parks and Wildlife (CPW), and other agencies/stakeholders to characterize the fish species that are expected to be present and coordinate with CPW and the Water Quality Control Division (WQCD) to understand their recommendations. The City will continue to monitor in-stream continuous temperatures at various points throughout Segment 02b, upstream Segment 02a, and select tributaries to Segment 02b, with the objective of identifying thermal sources (both natural and anthropogenic), and any spatial and temporal trends within the watershed. The City will also work towards resolving the uncertainty associated with the appropriate temperature standards and identifying whether the existing temperatures are the result of natural or irreversible human-induced conditions.

**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 ~~06/30/2019~~ [12/31/2019](#)

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

2b. Mainstem of the Yampa River from a point immediately above the confluence with Oak Creek to a point immediately below the confluence with Elkhead Creek.						
COUCYA02B	Classifications	Physical and Biological			Metals (ug/L)	
Designation			DM	MWAT		
Reviewable			acute	chronic		chronic
	Agriculture					
	Aq Life Cold 1	Temperature °C	CS-II	CS-II	Aluminum	---
	Recreation E				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)	---	---	Chromium III	---
Arsenic(chronic) = hybrid		E. Coli (per 100 mL)	---	126	Chromium III(T)	50
Expiration Date of 12/31/2021					Chromium VI	TVS
<u>Temperature(DM/MWAT) = current conditions</u>		Inorganic (mg/L)			Copper	TVS
<u>Expiration Date of 12/31/2024</u>			acute	chronic	Iron	---
		Ammonia	TVS	TVS	Iron(T)	---
		Boron	---	0.75	Lead	TVS
		Chloride	---	250	Manganese	TVS
		Chlorine	0.019	0.011	Mercury	---
		Cyanide	0.005	---	Molybdenum(T)	---
		Nitrate	10	---	Nickel	TVS
		Nitrite	---	0.05	Selenium	TVS
		Phosphorus	---	---	Silver	TVS
		Sulfate	---	WS	Uranium	---
		Sulfide	---	0.002	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.

Exhibit 4

Tri-State Generation and Transmission Assn., Inc.

Draft Proposed

Regulation #37

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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37.40 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; JUNE 10, 2019 RULEMAKING; FINAL ACTION AUGUST 12, 2019; EFFECTIVE DATE DECEMBER 31, 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

X. Dry Creek, Lower Colorado River Segment 4e

The Commission adopted site-specific copper standards for Lower Colorado River Segment 4e, based on the Fixed Monitoring Benchmark (FMB) application of the Biotic Ligand Model (BLM). Dry Creek is an ephemeral stream that has flow only in response to precipitation or discharge. Tri-State Generation and Transmission Association, Inc. (Tri-State) conducted sampling for the BLM parameters at four sites within the segment, including three sites downstream of the Tri-State Rifle Station discharge providing complete spatial coverage. The Commission determined that the Tri-State dataset was adequate to employ the FMB application in light of the lack of flow in Dry Creek, which made sample collection challenging. Also, based on the lack of flow, the close proximity of the three sample sites located downstream of the Tri-State Rifle Station, and the similar water quality at the three sample sites, the Commission determined that it was appropriate to combine data from the three downstream sites to derive FMB-based copper standards. Based on the evidence presented by Tri-State and in accordance with Section 31.3 of the Basic Standards and Methodologies for Surface Waters, the commission found that given the current discharge and environmental conditions, the FMB-based standards adopted in Segment 4e will not jeopardize downstream waters and that water quality classifications and standards of downstream waters will be attained and maintained.

The Commission will review these FMB-based standards in the next Basin Review Hearing, using data collected over the next five years, to ensure that standards capture any changes in water quality. Tri-State will continue necessary data collection and evaluation activities, to the extent feasible given the lack of flow in Dry Creek, to support review of the BLM-derived copper standards in the next Regulation No. 37 review hearing.

**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 ~~06/30/2019~~ [12/31/2019](#)

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	---	---
Qualifiers:			acute	chronic	Arsenic	340	---
Other:		D.O. (mg/L)	---	5.0	Arsenic(T)	---	100
Temporary Modification(s):		pH	6.5 - 9.0	---	Beryllium	---	---
Copper(ac/ch) = current conditions		chlorophyll a (mg/m2)	---	---	Cadmium	TVS	TVS
Expiration Date of 12/31/2019		E. Coli (per 100 mL)	---	630	Chromium III	TVS	TVS
		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
*Copper(acute) = Copper BLM-based FMB Cu FMB(ac)=267.0 ug/L below the Tri-State Rifle Station.		Chlorine	0.019	0.011	Manganese	TVS	TVS
*Copper(chronic) = Copper BLM-based FMB Cu FMB(ch)=158.4 ug/L below the Tri-State Rifle Station.		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 5

Upper Blue Sanitation District

Draft Proposed

Regulation #33

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

....

33.62 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; JUNE 10, 2019 RULEMAKING; FINAL ACTION AUGUST 12, 2019 EFFECTIVE DATE DECEMBER 31, 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

Blue River Segments 2a, 2b, and 2c (COUCBL02a, COUCBL02b, and COUCBL02c): Based on evidence submitted by Upper Blue Sanitation District (UBSD) that demonstrated a need for additional time to resolve the uncertainty in the underlying standards, the Commission extended the temporary modifications for arsenic on Blue River Segments 2a, 2b, and 2c until 12/31/2026.

The Commission adopted the arsenic temporary modifications in multiple segments across the state starting in 2013, with an expiration date of 12/31/2021. At the April 8, 2013 rulemaking, the Commission heard testimony that concurred with the finding from a December 13, 2011 rulemaking hearing that an initial reasonable lower limit of treatment technology for arsenic is 3.0 µg/L, pending further investigation by the Division, dischargers, and stakeholders. The arsenic temporary modifications were established by the Commission to allow for a temporarily less stringent application of the chronic arsenic standard in control requirements for both existing discharges and new or increased discharges.

The expiration date of 12/31/2021 was based on predicted revisions to EPA's IRIS for arsenic. Since the Commission adopted arsenic temporary modifications in multiple segments statewide, there has been considerable delay in EPA's revision of the arsenic IRIS value, and thus there is a delay in Colorado's revisions of its arsenic standards. Given this delay, UBSD sought an extension of the temporary modifications for arsenic on Blue River Segments 2a, 2b, and 2c. UBSD has demonstrated significant uncertainty regarding the underlying arsenic standards, has demonstrated instream attainment issues, and demonstrated there are compliance issues with WQBELs for arsenic. UBSD also submitted a Plan to Resolve Uncertainty regarding the arsenic temporary modifications.

Based on these demonstrations, the Commission extended the "hybrid" temporary modifications for arsenic on Blue River Segments 2a, 2b, and 2c, with an expiration date of 12/31/2026.

**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 ~~06/30/2019~~ [12/31/2019](#)

REGULATION #33 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Blue River Basin

2a. Mainstem of the Blue River from the confluence with French Gulch to a point one half mile below Summit County Road 3.							
COUCBL02A	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture		DM	MWAT		acute	chronic
UP	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	4	4
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					Chromium VI	TVS	TVS
*chlorophyll a (mg/m2)(chronic) = applies only above the facilities listed at 33.5(4). *Phosphorus(chronic) = applies only above the facilities listed at 33.5(4). *Zinc(acute) = e^(1.25 (ln(hard)+0.799)) *Zinc(chronic) = e^(1.25 (ln(hard)+0.799))		Inorganic (mg/L)			Copper	TVS	TVS
			acute	chronic	Iron	---	WS
		Ammonia	TVS	TVS	Iron(T)	---	1000
		Boron	---	0.75	Lead	TVS	TVS
		Chloride	---	250	Manganese	TVS	TVS/WS
		Chlorine	0.019	0.011	Mercury	---	0.01(t)
		Cyanide	0.005	---	Molybdenum(T)	---	160
		Nitrate	10	---	Nickel	TVS	TVS
		Nitrite	---	0.05	Selenium	TVS	TVS
		Phosphorus	---	0.11*	Silver	TVS	TVS(tr)
		Sulfate	---	WS	Uranium	---	---
		Sulfide	---	0.002	Zinc	SSE*	SSE*

2b. Mainstem of the Blue River from a point one half mile below Summit County Road 3 to the confluence with the Swan River.							
COUCBL02B	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	SSE*	SSE*
Temporary Modification(s):		chlorophyll a (mg/m2)	---	---	Chromium III	---	TVS
Arsenic(chronic) = hybrid		E. Coli (per 100 mL)	---	126	Chromium III(T)	50	---
Expiration Date of 12/31/2021					Chromium VI	TVS	TVS
*Cadmium(acute) = 1/2e^(1.0166(ln(hard)-3.132)) *Cadmium(chronic) = 1/2e^(1.0166(ln(hard)-3.132)) *Zinc(acute) = e^(0.9805(ln(hard)+1.402)) *Zinc(chronic) = e^(0.9805(ln(hard)+1.402))		Inorganic (mg/L)			Copper	TVS	TVS
			acute	chronic	Iron	---	WS
		Ammonia	TVS	TVS	Iron(T)	---	1000
		Boron	---	0.75	Lead	TVS	TVS
		Chloride	---	250	Manganese	TVS	TVS/WS
		Chlorine	0.019	0.011	Mercury	---	0.01(t)
		Cyanide	0.005	---	Molybdenum(T)	---	160
		Nitrate	10	---	Nickel	TVS	TVS
		Nitrite	---	0.05	Selenium	TVS	TVS
		Phosphorus	---	---	Silver	TVS	TVS(tr)
		Sulfate	---	WS	Uranium	---	---
		Sulfide	---	0.002	Zinc	SSE*	SSE*

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.

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

2c. Mainstem of the Blue River from the confluence with the Swan River to Dillon Reservoir.							
COUCBL02C	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture		DM	MWAT			
Reviewable	Aq Life Cold 1	Temperature °C	CS-I	CS-I	Aluminum	acute	chronic
	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)	---	---	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
			acute	chronic	Copper	TVS	TVS
		Ammonia	TVS	TVS	Iron	---	WS
		Boron	---	0.75	Iron(T)	---	1000
		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)	---	160
		Nitrite	---	0.05	Nickel	TVS	TVS
		Phosphorus	---	---	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.