



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 South Platte River Basin, Laramie River Basin, Republican River Basin, Smoky Hill River Basin, Regulation #38 (5 CCR 1002-38).

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

- Exhibit 1 - Regulation #38, Water Quality Control Division (Division);
- Exhibit 2 - Regulation #38, City of Black Hawk and Black Hawk-Central City Sanitation District (Black Hawk);
- Exhibit 3 - Regulation #38, Centennial Water & Sanitation District (Centennial);
- Exhibit 4 - Regulation #38, MillerCoors;
- Exhibit 5 - Regulation #38, London Mine;
- Exhibit 6 - Regulation #38, Metro Wastewater Reclamation District (Metro);
- Exhibit 7 - Regulation #38, Plum Creek Water Reclamation Authority (Plum Creek); and
- Exhibit 8 - Regulation #38, Raytheon.

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 and data related to discharger specific variances (DSVs), site-specific standards and associated longevity plans, and temporary modifications and the associated plans to resolve uncertainty. The commission may consider modifications to or deletion of the DSVs, site-specific standards, or temporary modifications on these segments depending on the information provided. If any party believes that a modification or deletion may be appropriate, the party should address the basis for those concerns in its responsive prehearing statement. These updates may include, but are not limited to, information from Suncor regarding the selenium DSV on Upper South Platte segments 15 and 16i (COSPUS15 and COSPUS16i), Climax Molybdenum regarding multiple temporary modifications on Clear Creek segments 7a and 7b (COSPCL07a and COSPCL07b), and Cottonwood Water and Sanitation District regarding selenium site-specific standards on Cherry Creek segment 4b (COSPCC04b).

SCHEDULE OF IMPORTANT DATES



Proponent's prehearing statement due	3/11/2020 5 pm	Additional information below.
Party status requests due	3/18/2020 5 pm	Additional information below.
Responsive prehearing statements due	4/15/2020 5 pm	Additional information below.
Rebuttal statements due	5/13/2020 5 pm	Additional information below.
Last date for submittal of motions	5/18/2020 noon	Additional information below.
Notify commission office if participating in prehearing conference by phone or email	5/18/2020 noon	Send email to cdphe.wqcc@state.co.us with participant(s) name(s)
Prehearing Conference (mandatory for parties)	5/19/2020 9:00 am	Building C, 1 st Floor, Room C1E Colorado Department of Public Health and Environment 4300 Cherry Creek Drive South Denver, CO 80246 Call in: +1 209-733-0776 PIN: 409 213#
Cutoff of negotiations	5/28/2020	N/A
Division's consolidated proposals	6/3/2020	N/A
Rulemaking Hearing	6/8/2020 10:00 am	Sabin-Cleere Conference Room Colorado Department of Public Health and Environment 4300 Cherry Creek Drive South Denver, CO 80246

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 was held in October 2018. 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 was held in November 2019. 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.wgcc@state.co.us, provided via an FTP site, CD or flash drive, or otherwise conveyed to the commission office so as to be received no later than the specified date.

PARTY STATUS:

Party status requests must be in writing and must provide:

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

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

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 are strongly encouraged to attend in-person, but those needing to participate by telephone should notify the commission office prior to the prehearing conference. Remote participants can call +1 209-733-0776 and enter the conference code 409 213#. 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 27, 2020.

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 12th day of February, 2020 at Denver, Colorado.

WATER QUALITY CONTROL COMMISSION



Trisha Oeth, Administrator



Exhibit 1

Water Quality Control Division

Regulation #38

DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Water Quality Control Commission

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

5 CCR 1002-38

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

38.1 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.

38.2 PURPOSE

These regulations establish classification and numeric standards for the South Platte River, the Laramie River, the Republican River and the Smoky Hill River, including all tributaries and standing bodies of water as indicated in section 38.6. 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. 31.0— Basic Standards and Methodologies for Surface Water~~BASIC STANDARDS AND METHODOLOGIES FOR SURFACE WATER.

38.3 INTRODUCTION

These regulations and Tables present the classifications and numeric standards assigned to stream segments listed in the attached Tables (See ~~section 38.6~~Appendix 38-1). As additional stream segments are classified and numeric standards for this drainage system are adopted, they will be added to or replace the numeric standards in the Tables in ~~section 38.6~~Appendix 38-1. 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”.

38.4 DEFINITIONS

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

38.5 BASIC STANDARDS

(1) ~~TEMPERATURE~~Temperature

All waters of the South Platte, Laramie, Republican and Smoky Hill River Basins 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 Aaquatic Llife Cclass 1 streams which also have a Wwater Ssupply classification, and are applied to Aaquatic Llife Cclass 2 streams which also have a Wwater Ssupply classification, on a case-by-case basis as shown in ~~the Tables 38.6~~Appendix 38-1. The column in the tables at 31.11 headed "Fish Ingestion" is presumptively applied to all Aaquatic Llife Cclass 1 streams which do not have a Wwater Ssupply classification, and are applied to Aaquatic Llife Cclass 2 streams which do not have a Wwater Ssupply classification, on a case-by-case basis, as shown in ~~the Tables in 38.6~~Appendix 38-1.

(3) URANIUMUranium

- (a) All waters of the South Platte 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 Wwater Ssupply 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), (f), and (g). These circumstances include headwaters, Direct Use Water Supply (DUWS) Lakes and Reservoirs, and other special circumstances determined by the Commission. ~~Additionally, prior to May 31, 2017, only total phosphorus and chlorophyll-a will be considered for adoption.~~ After ~~May-December 31, 2017~~2022, total nitrogen will be considered for adoption per the circumstances outlined in 31.17(eg) and (h).

Prior to ~~May~~ December 31, ~~2022~~2027, nutrient criteria will be adopted for headwaters on a segment by segment basis for the South Platte River 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 South Platte River Basin:

Segment	Permittee	Facility name	Permit No.
COSPUS01a	Alma Town of	Alma, Town of	CO0035769
COSPUS01a	Fairplay Sanitation District	Fairplay Sanitation District WWTF	CO0040088
COSPUS01a	Boy Scouts of America Pikes Peak Council	Camp Alexander	COG588036
COSPUS02a	Florissant Water and San Dist	Florissant Water and San Dist	CO0041416
COSPUS02a	Teller County	Teller County WW Utility Board	CO0044211
COSPUS03	Woodland Park City of	Woodland Park, City of	CO0043214
COSPUS03	YMCA Camp Shady Brook	Camp Shady Brook	CO0045993
COSPUS03	Lost Valley Ranch Corporation	Lost Valley Ranch	COG588122
COSPUS04	Will-O-Wisp Metro District	Will-O-Wisp Metro District	CO0041521
COSPUS04	Bailey WSD	Bailey WSD WWTF	COG588056
COSPUS04	Platte Canyon School Dist 1	Platte Canyon School Dist 1	COG588114
COSPUS05c	Mountain Water and Sanitation District	Mountain Water&Sanitation District	CO0022730
COSPUS06a	Roxborough Water and Sanitation District	Roxborough Park Water&San WWTF	CO0041645
COSPUS10a	Plum Creek Water Reclamation Authority	Plum Creek WW Authority WWTF	CO0038547
COSPUS10a	Perry Park Water and Sanitation District	Sageport WWTF	CO0043044
COSPUS11b	Perry Park Water and Sanitation District	Waucondah WWTP	CO0022551
COSPUS14	Littleton/Englewood Cities of	Littleton/Englewood, Cities of	CO0032999
COSPUS15	Metro Waste Water Reclamation District	Metro Wastewater Reclamation District	CO0026638
COSPUS15	Brighton City of	Brighton WWTF	CO0021547
COSPUS15	South Adams County WSD	Williams Monoco WWTF	CO0026662
COSPUS15	Metro Waste Water Reclamation District	Northern Treatment Plant	CO0048959
COSPUS16c	Ascentia Real Estate Holding Company LLC	Foxridge Farms MH Community	CO0028908
COSPUS16c	SouthWest Water Company	Hi-Land Acres W&SD WWTF	COG589072
COSPUS16c	Mile High Racing and Enter dba Arapahoe Park	Arapahoe Park Racetrack	COG589073
COSPUS16c	Rangeview Metro District	Coal Creek WW Reclamation Fac	COG589108
COSPUS16g	Centennial Water and San Dist	Marcy Gulch WWTF	CO0037966
COSPUS16i	Aurora City of - Aurora Water	Sand Creek Water Reuse Facility	CO0026611
COSPCH01	Stonegate Village Metropolitan District	Stonegate Village WWTF	CO0040291
COSPCH01	Pinery Water and Wastewater District	Pinery WWTF	CO0041092
COSPCH01	Parker Water and Sanitation District	Parker North WRF	CO0046507
COSPCH04	Arapahoe County W and WW Authority	Lone Tree Creek WWTP	CO0040681
COSPBE01a	Amen Real Estate LLC	Singin' River Ranch WWTF	CO0035971
COSPBE01b	Morrison Town of	Morrison Town of	CO0041432
COSPBE01e	Kittredge Sanitation and Water District	Kittredge San & Water District	CO0023841
COSPBE01e	Bruce & Jayne Hungate DBA Bear Creek Cabins	Bear Creek Cabins	CO0030856

Segment	Permittee	Facility name	Permit No.
COSPBE01e	Evergreen Metropolitan District	Evergreen Metropolitan Dist WWTF	CO0031429
COSPBE04a	Genesee WSD	Genesee Water & San District	CO0022951
COSPBE04a	Forest Hills Metro District	Forest Hills Metropolitan Dist	CO0037044
COSPBE05	West Jefferson County MD	W. Jefferson County Metro Dist	CO0020915
COSPBE05	Historic Brook Forest Inn LLC	Brook Forest Inn	CO0030261
COSPBE06a	Tiny Town Foundation Inc	Tiny Town	CO0036129
COSPBE06a	Aspen Park Metropolitan District	Aspen Park Metropolitan District	CO0000001
COSPBE06b	Jefferson County Public Schools R-1	Conifer High School WW Rec Plt	CO0047988
COSPCL01	Colorado Dept of Transportation	Eisenhower/Johnson Memorial Tunnels	CO0026069
COSPCL01	Clear Creek Skiing Corp	Loveland Ski Area WWTF	CO0040835
COSPCL02a	Georgetown Town of	Georgetown WWTF	CO0027961
COSPCL02c	Central Clear Creek SD	Central Clear Creek SD WWTF	COG588055
COSPCL05	Empire Town of	Empire Town of	COG588065
COSPCL09a	St Marys Glacier WSD	St Mary's Glacier WSD	CO0023094
COSPCL10	Shwayder Camp Wastewater	Shwayder Camp WWTF	CO0047473
COSPCL11	Idaho Springs City of	Idaho Springs WWTF	CO0041068
COSPCL12b	Clear Creek WWTP	Clear Creek WWTP	CO0046574
COSPCL13b	Black Hawk/Central City Sanitation District	Black Hawk/Central City SD WWTF	CO0046761
COSPCL14a	MillerCoors LLC	MillerCoors Golden Facility	CO0001163
COSPBD01	Westminster City of	Big Dry Creek WWTF	CO0024171
COSPBD01	Broomfield City and County	Broomfield WWTF	CO0026409
COSPBD01	Northglenn City of	Northglenn WWTF	CO0036757
COSPBO02b	San Lazaro Park Properties LLP c/o	San Lazaro MHP WWTF	CO0020184
COSPBO02b	BaseCamp Ventures LLC	Boulder Mountain Lodge WWTF	CO0040819
COSPBO02b	Mueller Red Lion Inn	Red Lion Inn WWTF	COG588118
COSPBO03	Nederland Town of	Nederland Town of WWTF	CO0020222
COSPBO04b	Eldorado Springs Wastewater	Eldorado Springs WWTF	CO0047651
COSPBO04b	San Souci MHP	San Souci MHP	COG588101
COSPBO07b	Louisville City of	Louisville WWTF	CO0023078
COSPBO07b	Lafayette City of	Lafayette WWTF	CO0023124
COSPBO07b	Erie Town of	Erie WWTF	CO0045926
COSPBO08	Superior Metropolitan District No 1	Superior Metropolitan Dist No1	CO0043010
COSPBO09	Boulder City of	75TH ST WWTP	CO0024147
COSPBO10	Erie Town of	Erie North Water Reclamation Facility	CO0048445
COSPBO10	B & B Mobile Home and RV Park	B & B Mobile Home & RV Park	COG588107
COSPBO14	Lake Eldora WSD	Lake Eldora WSD WWTF	CO0020010
COSPSV02a	Peaceful Valley Ranch LLC	Peaceful Valley Ranch WWTF	CO0048828
COSPSV02a	Seventh-Day Adventist Assoc of Colorado	Glacier View Ranch	CO0030112
COSPSV02a	Aspen Lodge at Estes Park Corp	Aspen Lodge at Estes Park Corp	CO0042820
COSPSV02b	Lyons Town of	Lyons Town of	CO0020877
COSPSV03	Longmont City of	Longmont WWTF	CO0026671
COSPSV03	St Vrain Sanitation District	St Vrain Sanitation District	CO0041700
COSPSV06	Niwot Sanitation District	Niwot Sanitation District	CO0021695
COSPSV06	Mead Town of	Lake Thomas Subdivision WWTF	CO0046868

Segment	Permittee	Facility name	Permit No.
COSPSV06	Mead Town of	Mead, Town of	CO0046876
COSPSV06	Fairways Metro Dist	Fairways WWTF	CO0048411
COSPMS01a	Fort Lupton City of	Fort Lupton WWTF	CO0021440
COSPMS01b	Evans City of	Evans City of WWTF	CO0020508
COSPMS01b	Kersey Town of	Kersey WWTF	CO0021954
COSPMS01b	Platteville Town of	Platteville WWTF	CO0040355
COSPMS01b	Evans City of	Hill-N-Park Sanitation Dist.	CO0047287
COSPMS01b	La Salle Town of	La Salle Town of	COG588058
COSPMS01b	Gilcrest Town of	Gilcrest WWTF	COG588121
COSPMS03a	Elizabeth Town of	Gold Creek	COG589037
COSPMS03a	Galeton Water and Sanitation District	Galeton Water & San District	CO0043320
COSPMS03a	Orica USA Inc	Orica USA, Inc.	CO0046221
COSPMS03a	Spring Valley Ranch	Spring Valley Ranch WWTF	CO0046965
COSPMS03a	Front Range Airport WWTF	Front Range Airport WWTF	CO0047741
COSPMS04	Lochbuie Town of	Lochbuie Town of	CO0047198
COSPMS05a	Swift Beef Company	Swift Beef – Lone Tree	CO0027707
COSPMS05c	Hudson WWTF	Hudson Mechanical WWTF	COG589104
COSPMS06	Keenesburg Town of	Keenesburg Town of	CO0041254
COSPMS06	Bennett Town of	Bennett Town of	COG589069
COSPBT02	Estes Park Sanitation District	Estes Park Sanitation District	CO0020290
COSPBT02	Upper Thompson Sanitation District	UTSD WWTF	CO0031844
COSPBT04 ^e	Loveland City of	Loveland WWTP	CO0026701
COSPBT05	Milliken Town of	Milliken Sanitation District	CO0042528
COSPBT05	Johnstown Town of	Low Point WWTP	CO0047058
COSPBT07	Hidden View Estates HOA	Hidden View Estates HOA WWTF	CO0048861
COSPBT09	Johnstown Town of	Johnstown Central WWTF	CO0021156
COSPBT09	Riverglen Homeowners Assoc	Riverglen HOA WWTF	CO0029742
COSPBT09	Berthoud Town of	Berthoud Town of	CO0046663
COSPBT10	Berthoud Town of	Serenity Ridge WWTF	CO0047007
COSPBT10	Western Mini-Ranch/Vaquero Estates Sewer Assoc.	Western Mini-Ranch/Vaquero Est	COG589095
COSPBT10	Berthoud Estates Community Assoc	Berthoud Estates WWTF	COG589097
COSPCP08	Fox Acres Community Services Corp	Fox Acres WWTF	COG589112
COSPCP08	Girl Scouts of Colorado	Magic Sky Ranch G.S. Camp	CO0047317
COSPCP11	Fort Collins City of	Mulberry WWTP	CO0026425
COSPCP11	Fort Collins City of	Drake WWTP	CO0047627
COSPCP12	Windsor, Town of	Windsor Town of WWTF	CO0020320
COSPCP12	Greeley City of	Greeley City of	CO0040258
COSPCP12	Leprino Foods Company	Leprino Greeley Facility WWTF	CO0048860
COSPCP13a	Anheuser Busch Inc	Nutri-Turf, Inc.	CO0039977
COSPCP13a	Eaton Town of	Eaton, Town of	CO0047414
COSPCP13a	Saddler Ridge Metro Dist Water Reclamation Facility	Saddler Ridge Metro Dist Water Reclamation Facility	COG589107
COSPCP13 ^b _c	Boxelder Sanitation District	Boxelder Sanitation District WWTF	CO0020478
COSPCP13 ^b _c	Wellington Town of	Wellington WWTF	CO0046451
COSPCP22	South Fort Collins Sanitation District	South Fort Collins San Dist	CO0020737

Segment	Permittee	Facility name	Permit No.
COSPLS01 _a	Western Sugar Cooperative	Fort Morgan Facility	CO0041351
COSPLS01 _a	Cargill Meat Solutions	Fort Morgan Beef Plant	CO0044270
COSPLS01 _a	Brush City of	Brush City of	CO0021245
COSPLS01 _a	Fort Morgan City of	Fort Morgan City of	CO0044849
COSPLS01 _a	Snyder Sanitation District	Snyder Sanitation District	COG588016
COSPLS01 _a	Morgan Heights WSD	Morgan Heights Water & Sewer Inc.	COG588040
COSPLS01 _b	Julesburg Town of	Julesburg Town of	CO0021113
COSPLS01 _b	Sterling City of	Sterling City of	CO0026247
COSPLS01 _b	Ovid Town of	Ovid Town of	COG588106
COSPLS02 _a	Leprino Foods Company	Fort Morgan Cheese Facility	CO0043958
COSPLS02 _a	Deer Trail Town of	Deer Trail WWTF	COG589002
COSPLS02 _a	Hillrose Town of	Hillrose WWTF	COG589030
COSPLS02 _a	Byers Water and Sanitation District	Byers Water and Sanitation District	COG589033
COSPLS02 _a	Eastern Adams County Metro District	Eastern Adams CO Metro Dist WWTF	COG589035
COSPLS02 _b	Kiowa Town of	Kiowa WWTF	CO0033405
COSPLS02 _b	Elbert Water Sanitation District	Elbert Water Sanitation District WWTF	COG589065
COSPRES03	Wray City of	Wray City of	CO0023833
COSPRES06	Flagler Town of	Flagler WWTF	COG589036
COSPRES06	Arriba Town of	Arriba WWTF	COG589055
COSPRES06	Holyoke City of	Holyoke, City of	COG589059
COSPRES06	Akron Town of	Akron WWTF	COG589061
COSPRES06	Haxtun Town of	Haxtun. Town of	COG589062
COSPRES06	Stratton Town of	Stratton WWTF	COG589100
COSPRES06	Burlington City of	Burlington City of WWTF	COG589114
COSPRES06	Seibert Town of	Seibert WWTF	COG589120
COSPRES07	Cheyenne Wells Sanitation District No 1	Cheyenne Wells Sanitation District	COG589039
Unclassified	Silco Oil Co	Tomahawk Truck Stop	COG589003

Prior to ~~May-December~~ 31, ~~2022~~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 38.5(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.

38.6 TABLES

(1) Introduction

The numeric standards for various parameters in this regulation and in the tables in Appendix 38-1 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 31.016. 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 38-1:

ac	=	acute (1-day)
°C	=	degrees celsius
ch	=	chronic (30-day)
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>
D.O.	=	D issolved oxygen
DUWS	=	direct use water supply
E. coli	=	<i>Escherichia coli</i>
mg/L	=	milligrams per liter
MWAT	=	maximum weekly average temperature
OW	=	outstanding waters
sp	=	S spawning
SSE	=	site-specific equation
T	=	total recoverable
t	=	total
tr	=	trout
<u>Trec</u>	=	<u>total recoverable</u>
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

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

Fe(ch) Iron	=	WS
Mn(ch) Manganese	=	WS
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 31.11(6);

- (i) existing quality as of January 1, 2000; or
- (ii)

Iron	=	300 µg/L↓ (dissolved)
Manganese	=	50 µg/L↓ (dissolved)
SO₄ Sulfate	=	250 mg/L↓

For all surface waters with a “~~W~~water ~~S~~supply” classification that are not in actual use as a water supply, no ~~W~~water ~~S~~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 µg/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 12/31/2024. Where a permit for an existing discharge is reissued or modified while the temporary modification is in effect, the division will include additional permit Terms and Conditions, which may include requirements for additional monitoring, source identification, and characterization of source control and treatment options for reducing arsenic concentrations in effluent.
- (iii) For new or increased discharges commencing on or after 6/1/2013, the temporary modification is: As(ch)=0.02-3.0 µg/L↓ (Trec), expiring on 12/31/2024.
 - (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 38-1, 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 µg/L↓ unless noted)**

PARAMETER ⁽¹⁾	TABLE VALUE STANDARDS ⁽²⁾⁽³⁾
--------------------------	---

PARAMETER ⁽¹⁾	TABLE VALUE STANDARDS ⁽²⁾⁽³⁾					
Aluminum (T _{rec})	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(warm) ⁽⁵⁾ = $(1.136672 - (\ln(\text{hardness}) * 0.041838)) * e^{(0.9789 * \ln(\text{hardness}) - 3.443)}$ Acute(cold) ⁽⁵⁾ = $(1.136672 - (\ln(\text{hardness}) * 0.041838)) * e^{(0.9789 * \ln(\text{hardness}) - 3.866)}$ Chronic = $(1.101672 - (\ln(\text{hardness}) * 0.041838)) * e^{(0.7977 * \ln(\text{hardness}) - 3.909)}$					
Chromium III ⁽⁶⁾	Acute = $e^{(0.819[\ln(\text{hardness})]+2.5736)}$ Chronic = $e^{(0.819[\ln(\text{hardness})]+0.5340)}$					
Chromium VI ⁽⁶⁾	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 ⁽⁷⁾	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)
	Cold Stream Tier I ⁽⁸⁾	CS-I	brook trout, cutthroat trout	June – Sept.	17.0	21.7
				Oct. - May	9.0	13.0
	Cold Stream Tier II ⁽⁸⁾	CS-II	all other cold-water species	April – Oct.	18.3	23.9 24.3
				Nov. - March	9.0	13.0
	Cold Lake ⁽⁹⁾	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	

PARAMETER ⁽¹⁾	TABLE VALUE STANDARDS ⁽²⁾⁽³⁾						
	Cold Large Lake (>100 acres surface area) ⁽⁹⁾	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, <u>stonecat</u>	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, <u>N</u> orthern redbelly dace, finescale dace, <u>razorback sucker</u> , white sucker, <u>mountain sucker</u>	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	Y ellow perch, walleye, pumpkinseed, smallmouth bass, striped bass, white bass, largemouth bass, bluegill, spottail shiner, <u>stonecat</u> , <u>N</u> orthern pike, tiger muskellunge, black crappie, common carp, gizzard shad, sauger, white crappie, wiper	April – Dec.	26. 3 2	29. 5 3	
				Jan. - March	13. 2 1	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 = $0.986 * e^{(0.9094[\ln(\text{hardness})]+0.6235)}$					

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 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) The acute(warm) cadmium equation applies to segments classified as Aquatic Life Warm Class 1 or 2. The acute(cold) cadmium equation applies to segments classified as Aquatic Life Cold Class 1 or 2.
- (6) 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 µg/L total chromium in those waters classified for domestic water use.

- (7) Selenium is a bioaccumulative metal and subject to a range of toxicity values depending upon numerous site-specific variables.
- ~~(8) 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.~~
- ~~(9) Lake trout-based summer temperature criteria [16.6 (ch), 22.4 (ac)] apply where appropriate and necessary to protect lake trout from thermal impacts.~~
- ~~(8) 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.~~
- ~~(9) All phosphorus standards are based upon the concentration of total phosphorus.~~
- ~~(10) 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) Upper South Platte Segment 6b, Chatfield Reservoir: Chlorophyll a Assessment Thresholds

chlorophyll a= 11.2 µg/L, summer average, 1 in 5 year allowable exceedance frequency
phosphorus(Tot) = 0.035 mg/L, summer average, 1 in 5 year allowable exceedance frequency.

- (b) Upper South Platte Segment 16h: Selenium Standards and Assessment Locations

Selenium Standards (µg/L):

West Toll Gate Creek: Selenium(chronic)=50.6, Selenium(acute)=119.2

East Toll Gate Creek: Selenium(chronic)=14.3, Selenium(acute)=15.9

Toll Gate Creek: Selenium(chronic)=26.5, Selenium(acute)=29.5

Selenium Assessment Locations:

- Toll Gate Creek (TG6): Downstream of the confluence of East and West Toll Gate Creeks, at 6th Avenue near the gage station.
- East Toll Gate Creek (ET1): Upstream of the confluence with West Toll Gate Creek, at Chambers Road and 1st Avenue.
- West Toll Gate Creek (WT1): Upstream of the confluence with East Toll Gate Creek, at 2nd Avenue.

(c) Upper South Platte Segment 15 and Middle South Platte Segment 1a: Dissolved Oxygen and Ammonia Standards

Dissolved Oxygen Standards:

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

<u>1-Day^{1,2,3}</u>	<u>3.0 mg/L (acute)</u>
<u>7-Day Average^{1,4,5}</u>	<u>5.0 mg/L</u>

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

<u>1-Day^{1,2}</u>	<u>2.0 mg/L (acute)</u>
<u>7-Day Mean of Minimums^{1,6}</u>	<u>2.5 mg/L</u>
<u>30-Day Average^{1,4}</u>	<u>4.5 mg/L</u>

Dissolved Oxygen Footnotes

1. For the purposes of determining ~~compliance with~~ attainment of the standards, dissolved oxygen measurements shall only be taken in the flowing portion of the stream and at mid-depth, ~~and~~ at least six inches above the bottom of the channel. Dissolved oxygen measurements in man-made pools are not to be used for determination of attainment of the standards. All sampling protocols and test procedures shall be in accordance with procedures and protocols approved by the division.
2. During a 24-hour day dissolved oxygen levels are likely to be lower during the nighttime when there is no photosynthesis. The dissolved oxygen levels should not drop below the acute standard (ELS acute standard of 3.0 mg/L or the Older Life Stage (OLS) standards of 2.0 mg/L). However, if during the Early Life Stage (ELS) period multiple measurements are below 3.0 mg/L during the same nighttime period, the multiple measurements shall be considered a single exceedance of the acute standard. For measurements below 2.0 mg/L during either the ELS or the OLS periods, each hourly measurement below 2.0 mg/L shall be considered an exceedance of the acute standards.
3. In July, the dissolved oxygen level may be lower than the 3.0 mg/L acute standard for up to 14 exceedances in any one year and up to a total of 21 exceedances in three years before there is a determination that the acute dissolved oxygen standards is not being met. Exceedances shall be counted as described in Footnote 2.
4. A minimum of four independent daily means must be used to calculate the average for the 7-day average standard. A minimum of eight independent daily means must be used to calculate the average for the 30-day average standard. The four days and the eight days must be representative of the 7-day and the 30-day periods respectively. The daily means shall be the mean of the daily high and low values. In calculating the mean values, the dissolved oxygen saturation value shall be used in place of any dissolved oxygen measurements which exceed saturation.
5. For Upper South Platte Segment 15, north of the Lupton Bottoms Ditch diversion, the ELS 7-day average standards for the period July 1 – June 31 shall be 4.6 mg/L.
6. The 7-day mean minimum is the average of the daily minimums measured at the location on each day during any 7-day period.

Ammonia Standards:

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

Ammonia Warm Water = mg/L as N (Total)

Acute = TVS

Chronic =

$$\text{chronic (Apr 1 - July 31)} = \left(\frac{0.0577}{1 + 10^{7.688 - pH}} + \frac{2.487}{1 + 10^{pH - 7.688}} \right) * \text{MIN} \left(2.85, 1.45 * 10^{0.028(25 - T)} \right)$$

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

Ammonia

Warm Water = (mg/l as N) Total

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

$$\text{chronic (Apr 1 - July 31)} = \left(\frac{0.0577}{1 + 10^{7.688 - pH}} + \frac{2.487}{1 + 10^{pH - 7.688}} \right) * \text{MIN} \left(2.85, 1.45 * 10^{0.028(25 - T)} \right)$$

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

NH₃ = old TVS

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

Upper South Platte Segment 15 and Middle South Platte Segment 1a: Dissolved Oxygen Assessment Locations

~~For the purpose of determining attainment of the standard, dissolved oxygen measurements shall only be taken in the flowing portion of the stream and at mid depth, and at least six inches above the bottom of the channel. Dissolved oxygen measurements in man-made pools are not to be used for determination of attainment of the standards.~~

- (d) Big Dry Creek Segment 1: Selenium Assessment Locations
- bdc 1.5: Upstream of Broomfield Wastewater Treatment Plant
 - bdc 2.0: Upstream of Westminster Big Dry Creek Wastewater Treatment Facility
 - bdc 4.5: Upstream of Northglenn Wastewater Treatment Plant
- (e) Big Dry Creek Segment 2 (Standley Lake): Chlorophyll a Assessment Thresholds
- Chlorophyll a = 4.4 µg/L, Mar-Nov average, 1 in 5 yr allowable exceedance frequency

- (f) Upper South Platte Segment 16i, Sand Creek from Toll Gate Creek to the confluence with the South Platte River: assessment locations for selenium and total mercury-

Selenium Standards ($\mu\text{g/L}$):

Upper: Selenium(chronic)=38.2, Selenium(acute)=45.1
Lower: Selenium(chronic)=9.0, Selenium(acute)=TVS

Selenium Assessment Locations:

- Upper – (SWA): Downstream of the confluence of Sand Creek and Toll Gate Creek approximately 250 meters upstream of the Sand Creek Water Reuse Facility (SCWRF) discharge near the Peoria Street Bridge.
- Lower – (SW1): Above Suncor, approximately 60 meters upstream of the Union Pacific Railroad crossing and upstream of Brighton Boulevard.

Mercury Assessment Locations and Method:

- Sand Creek (SWP) – Downstream of the sheet piling drop structure located near the Brighton Blvd. Bridge.
- Sand Creek (SWP2-1) – Approximately 600 feet downstream of Suncor Outfall 003 and immediately upstream of the Burlington Ditch Siphon.
- Attainment of the standard below Brighton Blvd. shall be assessed using the weighted 85th percentile total mercury concentration from both assessment locations.

- (g) Upper South Platte Segment 16g (Marcy Gulch): Selenium assessment-

Determination of attainment of the chronic and acute selenium standards will be based on the 85th and 95th percentile, respectively, of paired samples taken the same day from from the two following locations:

- L29: Marcy Gulch upstream of Santa Fe Drive, immediately upstream of the Centennial Water & Sanitation District WWTF
- L36: Marcy Gulch upstream of the confluence with the South Platte River.

- (h) Upper South Platte Segment 16j: Selenium standards ($\mu\text{g/L}$) and assessment-

Lee Gulch: Selenium(chronic)=10, Selenium(acute)=TVS

Little's Creek: Selenium(chronic)=6, Selenium(acute)= TVS

Big Dry Creek: Selenium(chronic)=23, Selenium(acute)=26

Little Dry Creek: Selenium(chronic)=11, Selenium(acute)=TVS

Determination of attainment of the chronic and acute selenium standards will be based on the 85th and 95th percentile, respectively. The selenium assessment locations are:

- Lee Gulch: Upstream of the confluence with the South Platte River

- Little's Creek: Upstream of the confluence with the South Platte River
- Big Dry Creek: Upstream of the confluence with the South Platte River
- Little Dry Creek: Upstream of the confluence with the South Platte River

(i) Cherry Creek Segment 4b: Selenium standards (µg/L) and assessment

Upper Cottonwood Creek:

October–February Selenium(acute/chronic)=TVS/14.0
 March–September Selenium(acute/chronic)=TVS/7.1

Lower Cottonwood Creek:

October–February Selenium(acute/chronic)=TVS/5.1
 March–September Selenium(acute/chronic)=TVS

Break between Upper and Lower Cottonwood Creek is at the confluence with Lone Tree Creek.

Upper Lone Tree Creek:

October–February Selenium(acute/chronic)=41.0/37.2
 March–September Selenium(acute/chronic)=19.3/19.0

Lower Lone Tree Creek: Selenium(acute/chronic)=TVS

Break between Upper and Lower Lone Tree Creek is at the ACCWA Lone Tree Facility Outfall.

Upper Windmill Creek: Selenium(acute/chronic)=TVS

Middle Windmill Creek:

October–February Selenium(acute/chronic)=TVS/15.1
 March–September Selenium(acute/chronic)=TVS/8.4

Lower Windmill Creek: Selenium(acute/chronic)=TVS

Break between Upper, Middle and Lower Windmill Creek is at the assessment locations.

Determination of attainment of the chronic and acute selenium standards will be based on the 85th and 95th percentile, respectively.

- Upper Cottonwood Creek: From headwaters to confluence with Lone Tree Creek, to be assessed at CT-P2 — 39.605694, -104.84825. At Peoria St.
- Lower Cottonwood Creek: From confluence with Lone Tree Creek to terminus at Cherry Creek Reservoir, to be assessed at CT2-39.627861, -104.85025. West of Perimeter Road and south of bike path.
- Upper Lone Tree Creek: From headwaters to just above site LTC-3, to be assessed using data from LTC-1 and LTC-2
 LTC-1 — 39.58435, -104.838017. Approximately 0.15 miles N of S. Revere Pkwy.
 LTC-2 — 39.59685, -104.838217. Approximately 10 yards N of E. Peakview Ave.

- Lower Lone Tree Creek: From site LTC-3 to confluence with Cottonwood Creek, to be assessed using data from LTC-3 and LTC-4
LTC-3 — 39.604817, - 104.837083. Below ACWWA Lone Tree facility outfall.
LTC-4 — 39.614483, 104.840217. Downstream of confluence with Windmill Creek
- Upper Windmill Creek: From Headwaters to WC-1 — Site WC-1-39.574967, - 104.830017. West of Potomac St and South of Broncos Pkwy.
- Middle Windmill Creek: All sites between (but not including) WC-1 and WC-2.
WC-1—39.574967, -104.830017. West of Potomac St and South of Broncos Pkwy.
WC-2—39.59655, -104.821767. North of Cherry Creek Trail.
- Lower Windmill Creek: From site WC-2 to confluence with Lone Tree Creek, to be assessed at WC-2-39.59655, -104.821767. North of Cherry Creek Trail.

(j) Clear Creek Segment 5: Manganese assessment

- Below Woods Creek: West Fork of Clear Creek approximately 0.3 miles downstream of Berthoud Falls (39.771829°, -105.803418°).
- Mouth of West Fork: West Fork of Clear Creek near County Road 257.

(k) Big Dry Creek Segments 2, 3, 4a, 4b, 5a, and 5b: Ambient-based Site-specific Radionuclide Standards

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

<u>Parameter</u>	<u>Segment 2 (Standley Lake)¹</u>	<u>Segment 3 (Great Western Reservoir)¹</u>	<u>Segments 4a, 4b, 5a, and 5b¹</u>
<u>Ambient-based site-specific standards</u>			
<u>Gross Alpha</u>	<u>6</u>	<u>5</u>	<u>NA</u>
<u>Gross Beta</u>	<u>9</u>	<u>12</u>	<u>NA</u>
<u>Plutonium</u>	<u>0.03</u>	<u>0.03</u>	<u>0.15^{2,3}</u>
<u>Americium</u>	<u>0.03</u>	<u>0.03</u>	<u>0.15^{2,3}</u>
<u>Tritium</u>	<u>500</u>	<u>500</u>	<u>500</u>
<u>Uranium</u>	<u>3</u>	<u>4</u>	<u>16.8 µg/L</u>
<u>Other site-specific standards</u>			
<u>Curium</u>	<u>60</u>	<u>60</u>	<u>60</u>
<u>Neptunium</u>	<u>30</u>	<u>30</u>	<u>30</u>

Radionuclides Footnotes:

1. Statewide standards also apply for radionuclides not listed above.
2. 0.15 pCi/L Statewide Basic Standards.
3. For plutonium and americium measurements in Segment 4a5 in Woman Creek and Segment 5 in Walnut Creek, attainment will be assessed based on the results of a 12-month flow-weighted rolling average concentration (computed monthly).

NA = No site-specific standard applies

(l) Upper South Platte Lakes Segment 19: Temperature Standards

Platte Canyon Reservoir:

DM and MWAT = CLL from 1/1 to 2/29

DM = CLL and MWAT = 25.0 from 3/1 to 12/31

Antero Reservoir:

DM and MWAT = CLL from 1/31 – 3/31

DM = CLL and MWAT = 19.6 from 4/1 to 12/31

Elevenmile Reservoir:

DM and MWAT = CLL from 1/31 – 3/31

DM = CLL and MWAT = 19.8 from 4/1 to 12/31

Spinney Mountain Reservoir:

DM and MWAT = CLL from 1/31 – 3/31

DM = CLL and MWAT = 20.2 from 4/1 to 12/31

Cheesman Reservoir:

DM and MWAT = CLL from 1/31 – 3/31

DM = CLL and MWAT = 21.9 from 4/1 to 12/31

Strontia Springs Reservoir:

DM and MWAT = CLL from 1/31 – 3/31

DM = CLL and MWAT = 22.6 from 4/1 to 12/31

Jefferson Lake:

DM and MWAT = CLL from 1/31 – 3/31

DM = 22.4 and MWAT = 16.6 from 4/1 to 12/31

All other locations DM and MWAT = CL, CLL year-round

(m) Cache la Poudre Segment 18: Temperature Standards

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

Barnes Meadow Reservoir DM = CL and MWAT = 16.6 from 4/1 – 12/31

Chambers Lake DM = 22.4 and MWAT = 16.6 from 4/1-12/31

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

(n) Lower South Platte Segment 3: Temperature Standards

All locations DM and MWAT = WL from 1/31 – 3/31

North Sterling Reservoir DM = WL and MWAT = 26.1 from 4/1 – 12/31

Jumbo Reservoir DM = WL and MWAT = 27 from 4/1-12/31

Jackson Reservoir DM = WL and MWAT = 28.1 from 4/1 – 12/31

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

(5) Stream Classifications and Water Quality Standards Tables

The stream classifications and water quality standards tables in Appendix 38-1 are incorporated herein by reference.

The following is information regarding duration and measured form of standards in Appendix 38-1:

- (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.

(6) Discharger Specific Variances

- (a) A Discharger Specific Variance (DSV) establishes a temporary water quality standard that represents the highest degree of protection of a classified use that is feasible within 20 years and is granted by the Commission pursuant to criteria contained in Regulation 31.7(4).
 - (i) In every case, the variance to the standard shall be temporary and must be re-examined not less than once every three years.
 - (ii) For DSVs that are longer than five years in duration, the Commission will submit the results of its re-evaluation to EPA within 30 days of the date the Commission completes its re-evaluation. Pursuant to 40 CFR 131.14(b)(1)(v)-(vi), the DSV will no longer be the applicable water quality standard for purposes of the Clean Water Act if the Commission does not conduct a re-evaluation consistent with the specified frequency or if the Commission does not submit the results within 30 days of completion of the re-evaluation process.
- (b) The first number of the DSV is the underlying standard previously adopted by the Commission for the segment and represents the long-term goal for the waterbody. The first number will be used for assessing attainment for the waterbody and for the development of effluent limitations. The second number is the Commission's determination of the effluent concentration with the highest degree of protection of the

classified use that is feasible for the discharger. Control requirements, such as discharge permit effluent limitations, shall be established using the first number 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 during the term of the DSV for the named discharger.

- (c) Upper South Platte River Segments 15 and 16i:

Discharger Specific Variance, Suncor Energy (U.S.A.) Inc., Commerce City Refinery (CO0001147): Adopted 10/11/2016.

Selenium (acute) = TVS: no limit; Selenium (chronic) = 9: 24 µg/L. Expiration date: 12/31/2023.

38.7 COMMISSION’S DETERMINATION REGARDING STATE WATERS

- (1) Introduction

The following list describes the Commission’s determinations regarding water bodies that do not contain “State Waters.”

- (2) Determinations

- (a) Marston Forebay located in Upper South Platte Segment 23 within Sections 11, 12, 13 and 14 in Township 5 South, Range 69 West of the 6th P.M. in the City and County of Denver, Colorado.

38.8 – 38.9 RESERVED

38.101 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; JUNE 8, 2020 RULEMAKING; FINAL ACTION AUGUST 10, 2020; EFFECTIVE DATE DECEMBER 31, 2020

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

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:

Cherry Creek segments 5 and 7: Rueter-Hess Reservoir was moved from Segment 5 to new Segment 7 to facilitate adoption of Class 2 Aquatic Life use classification based on diversity of fish present. The resegmentation also allowed for clarification that numeric nutrient standards apply to Rueter-Hess Reservoir. As part of this change, an exception for Segment 7 was added to the segment description for Segment 5.

Clear Creek segments 12a and 12b: The portion of Beaver Brook from Highway 40 to the confluence with Soda Creek, and the mainstem of Soda Creek from the source to the confluence with Clear Creek, were moved from Segment 12a to Segment 12b. Segment 12b previously contained only the portion of Beaver Brook from the source to Highway 40 and is classified as Aquatic Life Cold 1 with CS-I temperature standards. The move facilitated changing the Aquatic Life use (from Cold 2 to Cold 1) and the temperature standards (from CS-II to CS-I) based on presence of brook trout in these water bodies.

Big Dry Creek Segment 5: Lakes and reservoirs from Segment 5 were moved into new Segment 5b. This was to be consistent with the convention of keeping lakes and reservoirs in separate segments from streams. Segment 5a retained the stream portions from the parent segment. As part of this change, an exception for Segment 5a was added to the segment description for Segment 4a and an exception for Segment 5b was added to the segment description for Segment 7.

Big Thompson segments 2, 3, 4a, 4b, 4c, and 7: Segments 2, 3, and 4a were combined into Segment 2, as the uses and standards are the same for all three segments as a result of upgrades to the Aquatic Life use (from Cold 2 to Cold 1) on Segment 3 and Recreation use (from seasonal N/E to year-round E) on Segment 4a. From Segment 2, the exception of Segment 7 was deleted, which resulted in moving the mainstem of the North Fork of the Big Thompson River from the Rocky Mountain National Park boundary to the confluence with the Big Thompson River to Segment 2 (the uses and standards are the same for segments 2 and 7). From Segment 2, the references to Black Canyon Creek and Glacier Creek below Estes Park water treatment plant were deleted, as this portion of these waters is outside of the Rocky Mountain National Park boundary and is in Segment 2 by default. To minimize the number of deleted segments retained as placeholders, Segment 4a was deleted, Segment 4b was renamed Segment 3, and Segment 4c was renamed Segment 4; segments 4b and 4c were then also deleted. The result of all changes combined is that waters previously in segments 2, 3, 4a, 4b, 4c, and 7 now occupy segments 2, 3, 4, and 7.

Cache la Poudre segments 2b and 3: Elkhorn Creek, including its tributaries and wetlands, from the source to the confluence with the Cache la Poudre River, was moved from Segment 2b to Segment 3. The move facilitated changing the temperature standards from CS-II to CS-I based on presence of brook trout in Elkhorn Creek and its tributaries. As part of this change, an exception for Segment 3 was added to the segment description for Segment 2b.

Cache la Poudre segments 7, 8, and 9: Segments 7, 8 (except for a few tributaries), and 9 were combined into Segment 7, as the uses and standards are the same for all three segments as a result of upgrades to the Aquatic Life use (from Cold 2 to Cold 1) on Segment 8. Segment 7 has CS-II temperature standards. Some Segment 8 tributaries (Middle Fork Rabbit Creek, Stonewall Creek, North Fork Lone Pine Creek, and South Fork Lone Pine Creek, including all tributaries and wetlands) remained in Segment 8 to facilitate changing the Aquatic Life use from Cold 2 to Cold 1 and the temperature standards from CS-II to CS-I. As a result of these changes, Segment 9 is now vacant (shown as "Deleted." in Appendix 38-1).

Cache la Poudre segments 13b and 13c: The mainstem of Boxelder Creek from the source to above Slab Canyon Wash was moved from Segment 13b to Segment 13c to facilitate changing the Aquatic Life use from Warm to Cold. Segments 13b and 13c were then switched so that the segments were ordered from upstream to downstream. New Segment 13b contains Boxelder Creek from the source to Slab Canyon Wash, and the mainstems of South Branch of Boxelder Creek, Northern Branch of Boxelder Creek, and Sand Creek. New Segment 13c contains of Boxelder Creek from Slab Canyon to the confluence of the Cache la Poudre River.

Lower South Platte Segment 1: Segment 1 was split into segments 1a and 1b. Segment 1a includes the South Platte River from the Weld/Morgan County line to the Morgan/Washington

County line. Segment 1b includes the South Platte River from the Morgan/Washington County line to the Colorado/Nebraska border. This resegmentation facilitates changing the Aquatic Life use from Warm 2 to Warm 1 and the temperature standards from WS-II to WS-I on Segment 1a.

Lower South Platte segments 2a and 2b: Segments 2a and 2b were combined into new Segment 2, as the uses and standards are the same for both segments as a result of upgrades to the Aquatic Life use (from Warm 2 to Warm 1) on both segments and the Recreation use (from P to E) on Segment 2a, and the addition of the Water Supply use on Segment 2b. The segment description for Segment 2 is the same as Segment 2a, except it no longer has an exception for Segment 2b.

Lower South Platte Segment 3 and Middle South Platte Segment 8: Riverside Reservoir was moved from Lower South Platte Segment 3 to new Middle South Platte Segment 8. This change was made because Riverside Reservoir is actually in the Middle South Platte sub-basin.

Lower South Platte segments 4 and 5: Segments 4 and 5 were combined into Segment 4, as the uses and standards are the same for both segments as a result of application of the full suite of Aquatic Life standards on Segment 4 and an upgrade of the Recreation use (from P to E) on Segment 4. The segment description for Segment 4 was changed to eliminate the exception for Segment 5. Segment 5 was deleted.

Republican River segments 8 and 9: Segments 8 and 9 were combined into Segment 8, as the uses and standards are the same for both segments as a result of application of the full suite of Aquatic Life standards and upgrades to the Aquatic Life use (from Warm 2 to Warm 1) and Recreation use (from U to E) on Segment 8. The segment description for Segment 8 was changed to eliminate the exception for Segment 9. Segment 9 was deleted.

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

B. Aquatic Life Use Classifications and Standards

The commission reviewed information regarding the current Aquatic Life use classifications and evidence pertaining to existing aquatic communities. In addition, newly created segments were given the same Aquatic Life 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.

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, including sensitive 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 following segments were upgraded from Warm 1 to Cold 1:

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

The following segment was upgraded from Warm 2 to Cold 1:

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

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

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

The lists above include Aquatic Life use changes that apply to entire segments. Significant differences in the Aquatic Life use that warrant a change on only a portion of a segment are described in Section A (Water Body Segmentation).

The Aquatic Life Warm 1 Goal Qualifier was removed from the following segment because fish and benthic macroinvertebrate data demonstrate a wide variety of biota, including sensitive species, is currently being sustained:

[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 place 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. The lists in this section include Recreation use changes that apply to entire segments. Significant differences in the Recreation use that warrant a change on only a portion of a segment are described in Section A (Water Body Segmentation).

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 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.]

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 reviewed information regarding the current Water Supply use classifications and evidence pertaining to potable water supplies. In addition, newly created segments were given the same Water Supply 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. The lists in this section include Water Supply use changes that apply to entire segments. Significant differences in the Water Supply use that warrant a change on only a portion of a segment are described in Section A (Water Body Segmentation).

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 information regarding the current Agriculture use classifications and evidence pertaining to livestock watering and crop irrigation for three segments lacking an Agriculture use (Clear Creek segments 7a, 7b, and 8). Based on an evaluation of the available data and information, no changes were adopted at this time.

F. Other Standards to Protect Aquatic Life and Recreation Uses

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.

EPA has also released updated criteria or guidance for several other parameters, including copper (Aquatic Life), *E. coli* (Recreation), cyanotoxins (Recreation), and the human health risk exposure assumptions. However, the division does not recommend adopting EPA's recommendations for these parameters at this time, as these items are not included on the division's 10-year water quality roadmap.

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 upgraded to Reviewable on the following segments:

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

H. Ambient Quality-based Site-specific Standards

Site-specific ambient quality-based standards are adopted where a comprehensive analysis has been conducted demonstrating that ambient water quality levels elevated above the water quality standards are a result of natural conditions or are infeasible to reverse, but are adequate to protect the highest attainable use (31.7(1)(b)(ii)). All existing ambient-based standards were reviewed and no revisions were made.

Cherry Creek Segment 4b (COSPCH04b): During the 2015 Regulation No. 38 rulemaking hearing, the commission adopted site-specific ambient quality-based standards for selenium for Segment 4b and directed Cottonwood Water and Sanitation District (CWSD) to develop a study plan in agreement with stakeholders to collect additional baseline data that would support a "before and after discharge" evaluation of aquatic life. CWSD provided an update regarding the study plan developed and implemented for baseline data collection and describing activities completed since 2015. Given the potential detrimental effect of increased selenium to the downstream Aquatic Life use after discharge from the plant resumed in early 2020, CWSD agreed to a longevity plan that details continued data collection and highest attainable use evaluation activities to support review of the ambient-based standards. The plan includes fish tissue sampling to demonstrate whether the site-specific standards are appropriate to protect downstream aquatic communities such as the commercially important walleye fishery in Cherry Creek Reservoir. The commission will review these site-specific ambient quality-based standards in the next Regulation No. 38 rulemaking hearing using data collected by CWSD over the next five years to determine if the site-specific standards are still appropriate and protective of the Aquatic Life use in Segment 4b and downstream waters.

I. Site-specific Criteria-based Standards

Site-specific criteria-based standards are adopted where site-specific studies demonstrate standards other than table value standards are appropriate (31.7(1)(b)(iii)). All existing criteria-based site-specific standards were reviewed, and where appropriate were revised, allowed to expire, or deleted. Site-specific standards were allowed to expire from the following segments:

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

Site-specific copper standards based on the Fixed Monitoring Benchmark (FMB) application of the Biotic Ligand Model (BLM) were adopted for multiple segments during the December 2014 temporary modifications rulemaking (Big Thompson Segment 2) and the June 2015 Regulation No. 38 rulemaking (Upper South Platte segments 14, 15, and 16g and Middle South Platte Segment 1a). When these site-specific standards were adopted, proponents agreed to longevity plans that included continued monitoring and analysis of BLM parameters to facilitate review of the standards at the future basin hearings (38.90(I)).

Using these data, the commission reviewed all segments with BLM-based standards for copper. To determine if water quality conditions had changed significantly and standards revisions were necessary, existing BLM-based standards were compared to BLM-based standards calculated from the more recent datasets using a 95 percent confidence interval approach.

Based on an evaluation of more recent data, BLM-based site-specific copper standards were not revised for the following segments:

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

Based on an evaluation of more recent data, BLM-based site-specific copper standards were revised for the following segments:

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

The commission will review these BLM-based standards in the next Regulation No. 38 rulemaking hearing using data collected over the next five years to ensure that BLM-based standards capture any changes in water quality. Centennial Water and Sanitation District, Metro Wastewater Reclamation District, and Upper Thompson Sanitation District have agreed to longevity plans to continue all necessary data collection and evaluation activities to support review of the BLM-derived copper standards at the next Regulation No. 38 hearing.

J. Temporary Modifications

All existing temporary modifications were examined to determine whether they should be deleted, modified, extended, or left unchanged.

1. Temporary Modifications for Standards Other than Arsenic

The commission allowed to expire on 12/31/2020 temporary modifications on the following segments:

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

The commission took no action on the following temporary modifications:

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

Clear Creek Segments 7a and 7b (COSPCL07a and COSPCL07b): Climax Molybdenum Company provided an update to the commission regarding progress being made in implementing the existing plan to resolve uncertainty and demonstrating the ongoing need for the temporary modifications for chronic and acute temperature, copper, and zinc; chronic cadmium, iron, lead, mercury, nickel, and silver for Clear Creek Segments COSPCL07a and 07b that are set to expire 6/30/2023. The update demonstrated continued instream nonattainment, predicted compliance issues, and remaining uncertainty regarding the appropriate standards for these parameters to protect the uses and the extent to which instream conditions are reversible. Climax also provided an updated plan to resolve uncertainty that included details regarding the scheduled investigations and reporting required to resolve the uncertainty by 06/30/2023. Based on an evaluation of the available data and information, the commission made no changes at this time.

2. Temporary Modifications for Arsenic

To remain consistent with the commission's decisions regarding arsenic in section 38.99, all existing temporary modifications for arsenic of "As(ch)=hybrid" (expiration date of 12/31/24) were retained. In addition, for segments where a Water Supply or Aquatic Life use change resulted in a corresponding revision of the arsenic standard, an arsenic temporary modification was adopted for the 0.02 µg/L Water + Fish numeric standard in recognition of existing and predicted compliance issues, instream nonattainment, and 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.]

K. Discharger Specific Variances

There is currently one discharger specific variance (DSV) for selenium which applies to two segments in the South Platte River Basin (Upper South Platte segments 15 and 16i). The commission reviewed the basis for this DSV and the available information regarding Suncor Energy Refinery's progress toward achieving the alternate effluent limit. The commission determined that the alternative effluent Limit (AEL) adopted in 2016 continues to represent the highest attainable water quality that is feasible for Suncor to achieve. Therefore, the commission determined that this DSV is still appropriate and does not require revision at this time.

L. Temperature Standards

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 2015, the new temperature standards were adopted for all segments with an Aquatic Life use classification in Regulation No. 38. 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 38.6(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 38.6(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. 38. 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. 38. 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 segment:

[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. Adoption of lake trout standards are dependent on two factors: the existing temperature tier (cold lake or cold large lake) and whether a site-specific temperature standard was already in place. For cold lakes, only the chronic lake trout standard was adopted, as the acute cold lake temperature standard (21.2°C) is more protective than the acute lake trout standard (22.4°C). The chronic lake trout standard (16.6°C) is more protective than the chronic cold lake temperature standard (17.0°C). For cold large lakes, both acute and chronic lake trout standards were adopted unless there was a site-specific standard in place. Acute and chronic lake trout standards (22.4 and 16.6°C, respectively) are more protective than acute and chronic cold large lake standards (24.2 and 18.3°C, respectively). Lake trout standards were not proposed where an existing site-specific standard is applied.

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 2020 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. 38 during three triennial reviews - 2009, 2015, and 2020. 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, no site-specific temperature standards and fewer Aquatic Life use revisions were necessary compared to previous basin reviews.

Based upon a review of 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, no segments were identified as warranting a change to less stringent temperature standards as a result of water quality that 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.

Based upon information regarding the species expected to occur, the commission adopted revisions of temperature standards to protect thermally-sensitive species for the segments listed below.

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 WS-I to CS-II:

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

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

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

Further investigation of the appropriate temperature standards is needed, so no changes were adopted at this time for the following segments:

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

Clear Creek segments 14a, 14b, and 15 (COSPCL14a, COSPCL14b, COSPCL15):
These segments are currently assigned Warm Stream Tier II temperature standards. However, the commission recognizes that there is uncertainty about the appropriate temperature standards applied to these segments based on fish data available from Colorado Parks and Wildlife (CPW) for Clear Creek segments 14a and 15 that show the presence of several cold water species, including consistent catches of large numbers of brown trout and longnose suckers, and occasional catches of rainbow trout, and single-year catches of brook trout and cutthroat trout. Reproduction of cold water species has not been investigated in any of these segments. No fish data are available for Segment 14b, which is a short segment located between segments 14a and 15. These data raise questions regarding the appropriateness of the Warm Stream Tier II temperature standards for these segments. It is the commission's intent that the division will continue to work with CPW and interested parties to resolve the uncertainty regarding whether these populations are self-sustaining, and to what degree the drop structure at the most upstream portion of Segment 14a is obstructing upstream return of cold water fish flushed downstream.

M. Direct Use Water Supply Sub-classification

In the March 2012 rulemaking hearing, the commission adopted a sub-classification of the Domestic Water Supply Use called "Direct Use Water Supply Lakes and Reservoirs Sub-classification" (DUWS), in Regulation No. 31, at 31.13(1)(d)(i). This sub-classification is for Water Supply lakes and reservoirs where there is a plant intake location in the lake or reservoir or a man-made conveyance from the lake or reservoir that is used regularly to provide raw water directly to a water treatment plant that treats and disinfects raw water. The commission began to apply this sub-classification in 2013 and anticipated that it would take several basin reviews to evaluate all the reservoirs in the basin. The commission adopted the DUWS sub-classification on the following reservoirs and added "DUWS" to the classification column in the standards tables:

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

N. 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 38.5(3) in the Appendix 38-1 tables. For the acute and chronic uranium standards for all segments, the commission included a reference to 38.5(3) to clarify that the basic standard at 38.5(3) applies to all waters in Regulation No. 38. 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.

O. Correction of Typographical and Other Errors and Segmentation Clarification

The following edits were made to the regulation and Appendix 38-1 to improve clarity and correct typographical errors:

- The formatting of the tables in Appendix 38-1 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.
- Information was added at 38.6(5) specifying that the mercury standards apply to the total recoverable fraction of all forms, both organic and inorganic, of mercury in water.
- Information was added at 38.6(5) specifying that the ammonia, nitrate, and nitrite 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.
- Information regarding site-specific ammonia and dissolved oxygen standards previously adopted for Upper South Platte Segment 15 and Middle South Platte Segment 1a was moved from Appendix 38-1 to 38.6(4) and edited for clarity.
- Information regarding site-specific radionuclide standards previously adopted for Big Dry segments 2, 3, 4a, 4b, 5 was moved from Appendix 38-1 to 38.6(4) and edited for clarity.
- Some segments that were previously deleted, but were reserved as placeholders in Appendix 38-1, were permanently removed from the appendix. Previously-deleted segments that are necessary to maintain continuous numbering of segments were retained. The following previously-deleted segments were not necessary to maintain continuous numbering of segments, and were removed from Appendix 38-1:
 - Upper South Platte River: US06c, US10b
 - Bear Creek: 4b and 4c
- Existing site-specific temperature standards were reformatted in the tables to provide clarity and consistency for the following segments:
 - Upper South Platte River: 6b, 19
 - Bear Creek: 1b, 1c, 1e
 - Boulder Creek: 18
 - Big Thompson River: 11
 - Cache la Poudre River: 14, 20
 - Lower South Platte River: 3
- The segment descriptions in Appendix 38-1 were reviewed, and minor revisions were made to several segments to correct grammar, punctuation, and typos, and improve sentence structure. The purpose of these changes was to improve clarity and consistency of the segment descriptions.
 - Upper South Platte River: 2a, 3, 4, 7, 8, 11b, 16c, 19, 21, 22a, 23
 - Cherry Creek: 4a
 - Bear Creek: 3, 6a, 11

Clear Creek: 2a, 2b, 2c, 3a, 6, 10, 13b, 16b, 21, 24
Big Dry Creek: 1, 4a, 4b, 5a, 7
Middle South Platte River: 3a, 5c
Big Thompson River: 1, 2
Cache la Poudre River: 1, 6, 12, 18, 21
Laramie River: 2a, 4
Lower South Platte River: 3, 4
Republican River: 1, 3, 6

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

Upper South Platte River: 16d, 16e, 16f
Big Thompson River: 2, 3, 6, 8, 9, 10, 16, 17, 18, 19
Cache la Poudre River: 2b, 10a, 10b, 13a, 16, 18, 21

- Bear Creek Segment 7: The effective date of 12/31/2020 for phosphorous(chronic) was deleted from the 'Other' column, as the standard will be effective on the effective date of this regulation.
- Clear Creek Segment 12a: Added missing footnote "A" that accompanies Arsenic(T) standard of 0.02-10 µg/L.
- Clear Creek Segment 12b: The designation for the 0.02 µg/L arsenic standard for Water Supply was changed from arsenic to arsenic(T) to reflect the correct fraction of arsenic protective of the use.
- Clear Creek Segment 16b: The exception for Segment 17a was removed. Segment 17a is a lakes and reservoirs segment, while Segment 16b is a stream segment.
- Big Dry segments 2, 4a, 4b, 5a, and 5b: The beryllium standards were changed from beryllium to beryllium(T) to reflect the correct fraction of beryllium that is protective of the use.
- Big Thompson Segment 1: The exception of Segment 2 was unnecessary and was deleted for clarity.
- Big Thompson Segment 6: Exceptions for segments 7 through 10 were added for clarity.
- Big Thompson Segment 17: Exceptions for segments 17 and 18 were added for clarity.
- Cache la Poudre Segment 2b: An exception for Segment 1 was added for clarity.

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

5 CCR 1002-38

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

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

Effective ~~06/30/2020~~ 12/31/2020

Abbreviations and Acroynms

Aq	=	Aquatic
°C	=	degrees Celsius
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 temperature
DUWS	=	direct use water supply
E. coli	=	<i>Escherichia coli</i>
EQ	=	existing quality
mg/L	=	milligrams per liter
mg/m ²	=	milligrams per square meter
mL	=	milliliter
MWAT	=	maximum weekly average temperature
OW	=	outstanding waters
SSE	=	site-specific equation
T	=	total recoverable
t	=	total
tr	=	trout
TVS	=	table value standard
µg/L	=	micrograms per liter
UP	=	use-protected
WS	=	water supply
WS-I	=	warm stream temperature tier one
WS-II	=	warm stream temperature tier two
WS-III	=	warm stream temperature tier three
WL	=	warm lake temperature tier

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Upper South Platte River Basin

1a. Mainstem of the South Platte River from the source of the South and Middle Forks to the inlet of Cheesman Reservoir.						
COSPUS01A	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	Metals (ug/L)		
Reviewable	Aq Life Cold 1	acute	chronic	acute	chronic	
	Recreation E	Temperature °C	CS-I*	CS-I*	Aluminum	---
	Water Supply				Arsenic	340
		D.O. (mg/L)	---	6.0	Arsenic(T)	---
		D.O. (spawning)	---	7.0	Beryllium	---
Qualifiers:		pH	6.5 - 9.0	---	Cadmium	TVS
Other:		chlorophyll a (mg/m ²)	---	150*	Cadmium(T)	5.0
Temporary Modification(s):		E. Coli (per 100 mL)	---	126	Chromium III	---
Arsenic(chronic) = hybrid					Chromium III(T)	50
Expiration Date of 12/31/2024					Chromium VI	TVS
					Copper	TVS
					Iron	---
					Iron(T)	---
					Lead	TVS
					Lead(T)	50
					Manganese	TVS
					Mercury(T)	---
					Mercury(T)	0.01(†)
					Molybdenum(T)	---
					Nickel	TVS
					Nickel(T)	---
					Selenium	TVS
					Silver	TVS
					Uranium	--varies*
					Zinc	TVS
						TVS

1b. All tributaries to the South Platte River, including wetlands within the Lost Creek and Mt. Evans Wilderness Areas.						
COSPUS01B	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	Metals (ug/L)		
OW	Aq Life Cold 1	acute	chronic	acute	chronic	
	Recreation E	Temperature °C	CS-I	CS-I	Aluminum	---
	Water Supply				Arsenic	340
		D.O. (mg/L)	---	6.0	Arsenic(T)	---
		D.O. (spawning)	---	7.0	Beryllium	---
Qualifiers:		pH	6.5 - 9.0	---	Cadmium	TVS
Other:		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)	---
					Mercury(T)	0.01(†)
					Molybdenum(T)	---
					Nickel	TVS
					Nickel(T)	---
					Selenium	TVS
					Silver	TVS
					Uranium	--varies*
					Zinc	TVS
						TVS

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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Upper South Platte River Basin

2a. All tributaries to the South Platte River system, including all wetlands from the headwaters of the South and Middle Forks to a point immediately below the confluence with Tarryall Creek except for specific listings in Segment 1b, 2b and 2c.

COSPUS02A	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	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 12/31/2024					Chromium III(T)	50	---
*chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 38.5(4).		Inorganic (mg/L)			Chromium VI	TVS	TVS
*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).			acute	chronic	Copper	TVS	TVS
*Uranium(acute) = See 38.5(3) for details.		Ammonia	TVS	TVS	Iron	---	WS
*Uranium(chronic) = See 38.5(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)	---	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

2b. Mainstem of Mosquito Creek from the confluence with South Mosquito Creek to its confluence with the Middle Fork of the South Platte River.

COSPUS02B	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	TVS	TVS
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 12/31/2024					Chromium III(T)	50	---
*Uranium(acute) = See 38.5(3) for details.		Inorganic (mg/L)			Chromium VI	TVS	TVS
*Uranium(chronic) = See 38.5(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)	---	150
		Phosphorus	---	---	Nickel	TVS	TVS
		Sulfate	---	WS	Nickel(T)	---	100
		Sulfide	---	0.002	Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	---varies*	---varies*
					Zinc	---	220

All metals are dissolved unless otherwise noted.

T = total recoverable
t = total
tr = trout

D.O. = dissolved oxygen

DM = daily maximum

MWAT = maximum weekly average temperature

See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Upper South Platte River Basin

2c. South Mosquito Creek from the source to confluence with Mosquito Creek and No Name Creek from the source to the confluence with South Mosquito Creek.							
COSPUS02C	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture UP Aq Life Cold 1 Recreation E Water Supply	DM	MWAT	acute chronic			
	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	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 12/31/2024		Inorganic (mg/L)			Chromium III(T)	50	---
<u>*Uranium(acute) = See 38.5(3) for details.</u>		acute	chronic	Chromium VI	TVS	TVS	
<u>*Uranium(chronic) = See 38.5(3) for details.</u>		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)	---	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	---	280	

3. All tributaries to the South Platte River, including all wetlands from a point immediately below the confluence with Tarryall Creek to a point immediately above the confluence with the North Fork of the South Platte River, except for specific listings in Segment 1b.							
COSPUS03	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture Reviewable Aq Life Cold 1 Recreation E Water Supply	DM	MWAT	acute chronic			
	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	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 12/31/2024		Inorganic (mg/L)			Chromium III(T)	50	---
*chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 38.5(4).		acute	chronic	Chromium VI	TVS	TVS	
*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).		acute	chronic	Copper	TVS	TVS	
<u>*Uranium(acute) = See 38.5(3) for details.</u>	Ammonia	TVS	TVS	Iron	---	WS	
<u>*Uranium(chronic) = See 38.5(3) for details.</u>	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)	---	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Upper South Platte River Basin

4. Mainstem of the North Fork of the South Platte River, including all tributaries and wetlands from the source to the confluence with the South Platte River, except for ~~specific~~ listings in Segments 1b, 5a, 5b, and 5c.

COSPUS04	Classifications	Physical and Biological			Metals (ug/L)		
Designation			DM	MWAT		acute	chronic
Reviewable	Water Supply						
	Agriculture	Temperature °C	CS-I	CS-I	Aluminum	---	---
	Aq Life Cold 1		acute	chronic	Arsenic	340	---
	Recreation E	D.O. (mg/L)	---	6.0	Arsenic(T)	---	0.02
	Water Supply	D.O. (spawning)	---	7.0	Beryllium	---	---
Qualifiers:		pH	6.5 - 9.0	---	Cadmium	TVS	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 12/31/2024					Chromium VI	TVS	TVS
		Inorganic (mg/L)					
			acute	chronic	Copper	TVS	TVS
*chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 38.5(4).		Ammonia	TVS	TVS	Iron	---	WS
*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).		Boron	---	0.75	Iron(T)	---	1000
*Uranium(acute) = See 38.5(3) for details.		Chloride	---	250	Lead	TVS	TVS
*Uranium(chronic) = See 38.5(3) for details.		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)	---	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Upper South Platte River Basin

5b. Mainstem of Geneva Creek from the confluence with Scott Gomer Creek to the confluence with the North Fork of the South Platte River; all tributaries of Geneva Creek including wetlands from source to confluence with the North Fork of the South Platte River.

COSPUS05B	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: Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2024 *Uranium(acute) = See 38.5(3) for details. *Uranium(chronic) = See 38.5(3) for details.		pH	6.5 - 9.0	---	Cadmium	TVS	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	---
		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)	---	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		

5c. Mainstem of Gooseberry Gulch and all tributaries from source to Sunset Trail.

COSPUS05C	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 U		acute	chronic	Arsenic	340	---
	Water Supply	D.O. (mg/L)	---	6.0	Arsenic(T)	---	0.02-10 ^A
Qualifiers:		pH	6.5 - 9.0	---	Beryllium	---	---
Other: *Uranium(acute) = See 38.5(3) for details. *Uranium(chronic) = See 38.5(3) for details.		chlorophyll a (mg/m ²)	---	---	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	---	---	Mercury(T)	---	0.01(†)
		Sulfate	---	WS	Molybdenum(T)	---	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Upper South Platte River Basin

5d. Mainstem of Gooseberry Gulch and all tributaries from Sunset Trail to confluence with Elk Creek.							
COSPUS05D	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 U		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	TVS
		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	TVS	TVS
					Iron	---	WS
					Iron(T)	---	1000
					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

6a. Mainstem of the South Platte River from the outlet of Cheesman Reservoir to the inlet of Chatfield Reservoir.							
COSPUS06A	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	TVS
		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	TVS	TVS
					Iron	---	WS
					Iron(T)	---	1000
					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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Upper South Platte River Basin

6b. Chatfield Reservoir									
COSPUS06B	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*	CLLvaries*	Aluminum	---	---	
	Recreation E	Temperature °C	4/1 - 12/31	CLL	23.5	Arsenic	340	---	
	Water Supply					Arsenic(T)	---	0.02	
Qualifiers:			acute	chronic					
Other:		D.O. (mg/L)	---	6.0	Beryllium	---	---	---	
<p>*chlorophyll a (ug/L)(chronic) = measured through samples that are representative of the mixed layer during July-Sept, with an allowable exceedance frequency of 1in 5 yrs. See section 38.6(4) for assessment thresholds.</p> <p>*Phosphorus(chronic) = See section 38.6(4) for assessment thresholds.</p> <p>*Uranium(acute) = See 38.5(3) for details.</p> <p>*Uranium(chronic) = See 38.5(3) for details.</p> <p>*Temperature DM=CLL and MWAT=CLL from 1/1-3/31 DM=CLL and MWAT=23.5 from 4/1-12/31</p>		D.O. (spawning)	---	7.0	Cadmium	TVS	TVS	TVS	
		pH	6.5 - 9.0	---	Chromium III	---	TVS	---	TVS
		chlorophyll a (ug/L)	7/1 - 9/30	---	10*	Chromium III(T)	50	---	---
		E. Coli (per 100 mL)	---	126	Chromium VI	TVS	TVS	TVS	TVS
		Inorganic (mg/L)			Copper	TVS	TVS	TVS	TVS
			acute	chronic	Iron	---	WS	---	---
		Ammonia	TVS	TVS	Iron(T)	---	1000	---	---
		Boron	---	0.75	Lead	TVS	TVS	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)	---	150	---	---		
Nitrite	--0.05	0.05---	Nickel	TVS	TVS	TVS	TVS		
Phosphorus	---	0.03*	Nickel(T)	---	100	---	---		
Sulfate	---	WS	Selenium	TVS	TVS	TVS	TVS		
Sulfide	---	0.002	Silver	TVS	TVS(tr)	---	---		
			Uranium	--varies*	--varies*	---	---		
			Zinc	TVS	TVS	---	---		
6c. Deleted.									
COSPUS06C	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Upper South Platte River Basin

7. All tributaries to the South Platte River, including all wetlands from a point immediately below the confluence with the North Fork of the South Platte River to the outlet of Chatfield Reservoir except for specific-listings in Segments 8, 9, 10, 11, 12, and 13.

COSPUS07	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	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)	---	150
					Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	--varies*	--varies*
					Zinc	TVS	TVS

8. Mainstems of East and West Plum Creek from the source to the boundary of National Forest lands, including all tributaries and wetlands within the Plum Creek drainage which are on National Forest Lands, except for the specific-listing in Segment 9.

COSPUS08	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	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)	---	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.

D.O. = dissolved oxygen

T = total recoverable

DM = daily maximum

t = total

MWAT = maximum weekly average temperature

tr = trout

See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Upper South Platte River Basin

10b- Deleted-							
COSPUS10B	Classifications	Physical and Biological			Metals (ug/L)		
Designation		DM	MWAT	acute	chronic		
Qualifiers:		acute	chronic				
Other:		Inorganic (mg/L)					
		acute	chronic				
11a. All tributaries to the East Plum Creek system, including all wetlands which are not on national forest lands.							
COSPUS11A	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute	chronic		
UP	Aq Life Warm <u>21</u>	WS-II	WS-II	---	---	Aluminum	
	Recreation E	acute	chronic	340	---	Arsenic	
	Water Supply	---	5.0	---	0.02- 40 ^A	Arsenic(T)	
Qualifiers:	pH	6.5 - 9.0	---	---	---	Beryllium	
Other:	chlorophyll a (mg/m ²)	---	150	TVS	TVS	Cadmium	
	E. Coli (per 100 mL)	---	126	5.0	---	Cadmium(T)	
		Inorganic (mg/L)			---	TVS	Chromium III
		acute	chronic	50	---	Chromium III(T)	
	Ammonia	TVS	TVS	TVS	TVS	Chromium VI	
	Boron	---	0.75	TVS	TVS	Copper	
	Chloride	---	250	---	WS	Iron	
	Chlorine	0.019	0.011	---	1000	Iron(T)	
	Cyanide	0.005	---	TVS	TVS	Lead	
	Nitrate	10	---	50	---	Lead(T)	
	Nitrite	--0.5	0.5---	TVS	TVS/WS	Manganese	
	Phosphorus	---	0.17	---	0.01(†)	Mercury(T)	
	Sulfate	---	WS	---	150	Molybdenum(T)	
	Sulfide	---	0.002	TVS	TVS	Nickel	
				---	100	Nickel(T)	
				TVS	TVS	Selenium	
				TVS	TVS	Silver	
				--varies*	--varies*	Uranium	
				TVS	TVS	Zinc	

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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Upper South Platte River Basin

11b. All tributaries to the West Plum Creek system, including all wetlands, which are not on national forest lands, except for specific listings in Segments 9 and 12.

COSPUS11B	Classifications	Physical and Biological			Metals (ug/L)		
		DM	MWAT	acute	chronic		
UP	Agriculture	Temperature °C	WS-I	WS-I	Aluminum	---	---
	Aq Life Warm 2		acute	chronic	Arsenic	340	---
	<u>Water Supply</u>	D.O. (mg/L)	---	5.0	Arsenic(T)	---	1000 02-10 ^A
	Recreation E	pH	6.5 - 9.0	---	Beryllium	---	---
Qualifiers:		chlorophyll a (mg/m ²)	---	150*	Cadmium	TVS	TVS
Other:		E. Coli (per 100 mL)	---	126	<u>Cadmium(T)</u>	<u>5.0</u>	---
*chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 38.5(4).		Inorganic (mg/L)			Chromium III	TVS ---	TVS
*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).			acute	chronic	Chromium III(T)	--- <u>50</u>	400 ---
*Uranium(acute) = See 38.5(3) for details.		Ammonia	TVS	TVS	Chromium VI	TVS	TVS
*Uranium(chronic) = See 38.5(3) for details.		Boron	---	0.75	Copper	TVS	TVS
		Chloride	---	250 -	<u>Iron</u>	---	<u>WS</u>
		Chlorine	0.019	0.011	Iron(T)	---	1000
		Cyanide	0.005	---	Lead	TVS	TVS
		Nitrate	100 <u>10</u>	---	<u>Lead(T)</u>	<u>50</u>	---
		Nitrite	0.5 -	0.5 --- -	Manganese	TVS	TVS/ <u>WS</u>
		Phosphorus	---	0.17*	<u>Mercury(T)</u>	---	0.01(+)
		Sulfate	---	WS -	Molybdenum(T)	---	150
		Sulfide	---	0.002	Nickel	TVS	TVS
					<u>Nickel(T)</u>	---	<u>100</u>
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	varies *	varies *
					Zinc	TVS	TVS

12. Mainstem of Garber Creek and Jackson Creek from the boundary of National Forest lands to the confluence with West Plum Creek; mainstem of Bear Creek from the outlet of Perry Park Reservoir, a.k.a. Waucondah Reservoir, to the confluence with West Plum Creek.

COSPUS12	Classifications	Physical and Biological			Metals (ug/L)		
		DM	MWAT	acute	chronic		
Reviewable	Agriculture	Temperature °C	WS-I	WS-I	Aluminum	---	---
	Aq Life Warm 1		acute	chronic	Arsenic	340	---
	Recreation E	D.O. (mg/L)	---	5.0	Arsenic(T)	---	0.02
	<u>Water Supply</u>	pH	6.5 - 9.0	---	Beryllium	---	---
Qualifiers:		chlorophyll a (mg/m ²)	---	150	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 12/31/2024		Ammonia	TVS	TVS	Chromium VI	TVS	TVS
*Uranium(acute) = See 38.5(3) for details.		Boron	---	0.75	Copper	TVS	TVS
*Uranium(chronic) = See 38.5(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	0.5 -	0.5 --- -	Manganese	TVS	TVS/WS
		Phosphorus	---	0.17	<u>Mercury(T)</u>	---	0.01(+)
		Sulfate	---	WS	Molybdenum(T)	---	150
		Sulfide	---	0.002	Nickel	TVS	TVS
					<u>Nickel(T)</u>	---	<u>100</u>
					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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Upper South Platte River Basin

13. Mainstem of Deer Creek, including the North and South Forks, from the source to Chatfield Reservoir.						
COSPUS13	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	acute		chronic
Reviewable	Aq Life Cold 1	CS-II	CS-II	Aluminum	---	---
	Recreation E	acute	chronic	Arsenic	340	---
	Water Supply			Arsenic(T)	---	0.02
Qualifiers:				Beryllium	---	---
Other:				Cadmium	TVS	TVS
Temporary Modification(s):				Cadmium(T)	5.0	---
Arsenic(chronic) = hybrid				Chromium III	---	TVS
Expiration Date of 12/31/2024				Chromium III(T)	50	---
		Inorganic (mg/L)		Chromium VI	TVS	TVS
		acute	chronic	Copper	TVS	TVS
<u>*Uranium(acute) = See 38.5(3) for details.</u>				Iron	---	WS
<u>*Uranium(chronic) = See 38.5(3) for details.</u>				Iron(T)	---	1000
				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
14. Mainstem of the South Platte River from the outlet of Chatfield Reservoir to the Burlington Ditch diversion in Denver, Colorado.						
COSPUS14	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	acute		chronic
Reviewable	Aq Life Warm 1	WS-I*	WS-I*	Aluminum	---	---
	Recreation E	acute	chronic	Arsenic	340	---
	Water Supply			Arsenic(T)	---	0.02
Qualifiers:				Beryllium	---	---
Other:				Cadmium	TVS	TVS
Temporary Modification(s):				Cadmium(T)	5.0	---
Arsenic(chronic) = hybrid				Chromium III	---	TVS
Expiration Date of 12/31/2024				Chromium III(T)	50	---
		Inorganic (mg/L)		Chromium VI	TVS	TVS
		acute	chronic	Copper	---	TVS*
<u>*Copper(acute) = Copper BLM-based FMB</u>				Copper	TVS*	---
<u>Cu FMB(ac)=31.5 ug/l</u>				Iron	---	WS
<u>downstream of Marcy Gulch.</u>				Iron(T)	---	1000
<u>*Copper(chronic) = Copper BLM-based FMB</u>				Lead	TVS	TVS
<u>Cu FMB(ch)=20.8 ug/l</u>				Lead(T)	50	---
<u>downstream of Marcy Gulch.</u>				Manganese	TVS	TVS/190
<u>*Uranium(acute) = See 38.5(3) for details.</u>				Mercury(T)	---	0.01(±)
<u>*Uranium(chronic) = See 38.5(3) for details.</u>				Molybdenum(T)	---	150
<u>*Temperature = summer criteria apply from 2/14 -</u>				Nickel	TVS	TVS
<u>11/30</u>				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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Upper South Platte River Basin

15. Mainstem of the South Platte River from the Burlington Ditch diversion in Denver, Colorado, to a point immediately below the confluence with Big Dry Creek.							
COSPUS15	Classifications	Physical and Biological			Metals (ug/L)		
Designation		DM	MWAT		acute	chronic	
<u>UPR</u> Reviewable	Agriculture						
	Aq Life Warm <u>21</u>	WS-I	WS-I	Aluminum	---	---	
	Recreation E	acute	chronic	Arsenic	340	---	
	Water Supply	varies*	varies*	Arsenic(T)	---	0.02- 40 ^A	
Qualifiers:							
Other:							
Temporary Modification(s):							
Arsenic(chronic) = hybrid							
Expiration Date of 12/31/2024							
Chloride(chronic) = current condition							
Sulfate(chronic) = current condition							
temperature(DM/MWAT) = current condition							
Expiration Date of 12/31/2020							
Discharger Specific Variance(s):							
Selenium(acute) = TVS: no limit							
Selenium(chronic) = TVS: 24 µg/L							
Expiration Date of 12/31/2023							
*Ammonia(acute) = See section 38.6(4)attached table for site-specific standards.							
*Ammonia(chronic) = See section 38.6(4)attached table for site-specific standards.							
*Copper(acute) = Copper BLM-based FMB Cu FMB(ac)= 35.4 <u>26.4</u> ug/l							
Downstream of the Metro Hite WWTF outfall.							
*Copper(chronic) = Copper BLM-based FMB Cu FMB(ch)= 23.5 <u>18.0</u> ug/l							
Downstream of the Metro Hite WWTF outfall.							
*Uranium(acute) = See 38.5(3) for details .							
*Uranium(chronic) = See 38.5(3) for details .							
*D.O. (mg/L)(acute) = See section 38.6(4)attached table for site-specific standards.							
*D.O. (mg/L)(chronic) = See section 38.6(4)attached table for site-specific standards.							
*pH(acute) = 6.0 - 9.0 from 64th Ave. downstream 2 miles							
*Variance: Selenium = see 38.6(6) for details.							
		Inorganic (mg/L)					
		acute	chronic				
	Ammonia	TVS*	TVS*	Copper	---	TVS*	
	Boron	---	0.75	Copper	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	1.0	1.0	Manganese	TVS	TVS/400	
	Phosphorus	---	---	Mercury(T)	---	0.01(+)	
	Sulfate	---	WS	Molybdenum(T)	---	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Upper South Platte River Basin

16a. Mainstem of Sand Creek from the confluence of Murphy and Coal Creek in Arapahoe County to the confluence with the Toll Gate Creek.							
COSPUS16A	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute		chronic	
Reviewable	Aq Life Warm 2 Water Supply Recreation E	Temperature °C	WS-II	WS-II	Aluminum	---	---
Qualifiers:			acute	chronic	Arsenic	340	---
		D.O. (mg/L)	---	5.0	Arsenic(T)	---	4000 <u>02-10</u> ^A
Other:		pH	6.5 - 9.0	---	Beryllium	---	---
		chlorophyll a (mg/m ²)	---	---	Cadmium	TVS	TVS
		Inorganic (mg/L)			Cadmium(T)	<u>5.0</u>	---
			acute	chronic	Chromium III	TVS ---	TVS
		Ammonia	TVS	TVS	Chromium III(T)	--- <u>50</u>	400 ---
		Boron	---	0.75	Chromium VI	TVS	TVS
		Chloride	---	--- <u>250</u>	Copper	TVS	TVS
		Chlorine	0.019	0.011	Iron	---	<u>WS</u>
		Cyanide	0.005	---	Iron(T)	---	1000
		Nitrate	400 <u>10</u>	---	Lead	TVS	TVS
		Nitrite	--- <u>0.5</u>	0.5 ---	Lead(T)	<u>50</u>	---
		Phosphorus	---	---	Manganese	TVS	TVS/ <u>WS</u>
		Sulfate	---	--- <u>WS</u>	Mercury(T)	---	0.01(†)
		Sulfide	---	0.002	Molybdenum(T)	---	150
					Nickel	TVS	TVS
					Nickel(T)	---	<u>100</u>
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	--- <u>varies*</u>	--- <u>varies*</u>
					Zinc	TVS	TVS
16b. Aurora Reservoir.							
COSPUS16B	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute		chronic	
Reviewable	Aq Life Warm 1 Recreation E Water Supply DUWS	Temperature °C	WL	WL	Aluminum	---	---
Qualifiers:			acute	chronic	Arsenic	340	---
		D.O. (mg/L)	---	5.0	Arsenic(T)	---	0.02
Other:		pH	6.5 - 9.0	---	Beryllium	---	---
		chlorophyll a (ug/L)	---	---	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)	---	1000
		Nitrate	10	---	Lead	TVS	TVS
		Nitrite	--- <u>0.5</u>	0.5 ---	Lead(T)	50	---
		Phosphorus	---	---	Manganese	TVS	TVS/WS
		Sulfate	---	WS	Mercury(T)	---	0.01(†)
		Sulfide	---	0.002	Molybdenum(T)	---	150
					Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	--- <u>varies*</u>	--- <u>varies*</u>
					Zinc	TVS	TVS

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

D.O. = dissolved oxygen
 DM = daily maximum
 MWAT = maximum weekly average temperature
 See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Upper South Platte River Basin

16c. All tributaries to the South Platte River, including all wetlands, from the outlet of Chatfield Reservoir, to a point immediately below the confluence with Big Dry Creek, except for specific listings in the subbasins of the South Platte River, and in Segments 16a, 16d, 16e, 16f, 16g, 16h, 16i, 16j, and 16k.

COSPUS16C	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute	chronic		
UP	Aq Life Warm 2	Temperature °C	WS-II	WS-II	Aluminum	---	---
	Recreation E		acute	chronic	Arsenic	340	---
Qualifiers:		D.O. (mg/L)	---	5.0	Arsenic(T)	---	100
Other:		pH	6.5 - 9.0	---	Beryllium	---	---
chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 38.5(4).		chlorophyll a (mg/m ²)	---	150	Cadmium	TVS	TVS
*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).		E. Coli (per 100 mL)	---	126	Chromium III	TVS	TVS
*Uranium(acute) = See 38.5(3) for details.		Inorganic (mg/L)			Chromium III(T)	---	100
*Uranium(chronic) = See 38.5(3) for details.			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)	---	150
		Nitrite	---0.5-	0.5---	Nickel	TVS	TVS
		Phosphorus	---	0.17*	Selenium	TVS	TVS
		Sulfate	---	---	Silver	TVS	TVS
		Sulfide	---	0.002	Uranium	--varies*	---varies*
					Zinc	TVS	TVS

16d. Second Creek from the source to the O'Brian Canal. [at 39.898789, 104.817661.](#)

COSPUS16D	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	---	---
	Water Supply		acute	chronic	Arsenic	340	---
Recreation E		D.O. (mg/L)	---	3.3*	Arsenic(T)	---	4000,02-10 ^A
		pH	6.5 - 9.0	---	Beryllium	---	---
Qualifiers:		chlorophyll a (mg/m ²)	---	150*	Cadmium	TVS	TVS
Other:		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0	---
*chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 38.5(4).		Inorganic (mg/L)			Chromium III	TVS---	TVS
*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).			acute	chronic	Chromium III(T)	---50	400---
*Uranium(acute) = See 38.5(3) for details.		Ammonia	TVS	TVS	Chromium VI	TVS	TVS
*Uranium(chronic) = See 38.5(3) for details.		Boron	---	0.75	Copper	TVS	TVS
*D.O. (mg/L)(chronic) = 15th percentile of D.O. measurements collected between 6:30 a.m. and 6:30 p.m.		Chloride	---	---250-	Iron	---	WS
		Chlorine	0.019	0.011	Iron(T)	---	1000
		Cyanide	0.005	---	Lead	TVS	TVS
		Nitrate	40010	---	Lead(T)	50	---
		Nitrite	---0.5-	0.5---	Manganese	TVS	TVS _{WS}
		Phosphorus	---	0.17*	Mercury(T)	---	0.01(†)
		Sulfate	---	---WS-	Molybdenum(T)	---	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Upper South Platte River Basin

16e. Third Creek from the source to the O'Brian Canal. at 39.917346, -104.784028.							
COSPUS16E	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	---	---
	Water Supply		acute	chronic	Arsenic	340	---
Qualifiers:	Recreation E	D.O. (mg/L)	---	4.0*	Arsenic(T)	---	4000.02-10 ^A
		pH	6.5 - 9.0	---	Beryllium	---	---
Other:		chlorophyll a (mg/m ²)	---	---	Cadmium	TVS	TVS
		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0	---
		Inorganic (mg/L)			Chromium III	TVS ---	TVS
			acute	chronic	Chromium III(T)	--- 50	400 ---
		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	40010	---	Lead(T)	50	---
		Nitrite	--- 0.5 ⁻	0.5 ---	Manganese	TVS	TVS WS
		Phosphorus	---	---	Mercury(T)	---	0.01(+)
		Sulfate	---	--- WS ⁻	Molybdenum(T)	---	150
		Sulfide	---	0.002	Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	--- varies*	--- varies*
					Zinc	TVS	TVS

16f. Barr Lake Tributary from the source to the Denver Hudson Canal. at 39.941142, -104.748387.							
COSPUS16F	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 E		acute	chronic	Arsenic	340	---
Qualifiers:		D.O. (mg/L)	---	narrative*	Arsenic(T)	---	100
		pH	6.5 - 9.0	---	Beryllium	---	---
Other:		chlorophyll a (mg/m ²)	---	150*	Cadmium	TVS	TVS
		E. Coli (per 100 mL)	---	126	Chromium III	TVS	TVS
		Inorganic (mg/L)			Chromium III(T)	---	100
			acute	chronic	Chromium VI	TVS	TVS
		Ammonia	TVS	TVS	Copper	TVS	TVS
		Boron	---	0.75	Iron(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)	---	150
		Nitrite	--- 0.5 ⁻	0.5 ---	Nickel	TVS	TVS
		Phosphorus	---	0.17*	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Upper South Platte River Basin

16h. Mainstem of West Toll Gate Creek, including all tributaries and wetlands, upstream of the confluence with East Toll Gate Creek. Mainstem of East Toll Gate Creek, including all tributaries and wetlands, upstream of the confluence with West Toll Gate Creek. Mainstem of Toll Gate Creek, downstream of the confluence of East and West Toll Gate Creeks, to the confluence with Sand Creek.							
COSPUS16H	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute chronic			
		Temperature °C	WS-II	WS-II	Aluminum	---	---
Reviewable	Aq Life Warm 2	acute	chronic	Arsenic	340	---	
	<u>Water Supply</u>	D.O. (mg/L)	---	5.0	Arsenic(T)	---	<u>7.60,02-10</u> ^A
Qualifiers:	Recreation E	pH	6.5 - 9.0	---	Beryllium	---	---
		Fish Ingestion Standards	chlorophyll a (mg/m ²)	---	150*	Cadmium	TVS
Other:	E. Coli (per 100 mL)	Inorganic (mg/L)			<u>Cadmium(T)</u>	<u>5.0</u>	---
		Ammonia	TVS	TVS	Chromium III	<u>TVS---</u>	TVS
*chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 38.5(4).	*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).	acute	chronic	Chromium III(T)	<u>---50</u>	<u>100---</u>	
*Selenium(acute) = See section 38.6(4)(b) for selenium standards and assessment locations.	*Selenium(chronic) = See section 38.6(4)(b) for selenium standards and assessment locations.	Boron	---	0.75	Chromium VI	TVS	TVS
*Uranium(acute) = See 38.5(3) for details.	*Uranium(chronic) = See 38.5(3) for details.	Chloride	---	<u>---250</u>	Copper	TVS	TVS
		Chlorine	0.019	0.011	Iron	---	<u>WS</u>
		Cyanide	0.005	---	Iron(T)	---	1000
		Nitrate	<u>10010</u>	---	Lead	TVS	TVS
		Nitrite	<u>---0.5</u>	<u>0.5---</u>	<u>Lead(T)</u>	<u>50</u>	---
		Phosphorus	---	0.17*	Manganese	TVS	TVS/ <u>WS</u>
		Sulfate	---	<u>---WS</u>	Mercury(T)	---	0.01(†)
		Sulfide	---	0.002	Molybdenum(T)	---	150
					Nickel	TVS	TVS
					<u>Nickel(T)</u>	---	<u>100</u>
					Selenium	varies*	varies*
					Silver	TVS	TVS
					Uranium	<u>---varies*</u>	<u>---varies*</u>
					Zinc	TVS	TVS

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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Upper South Platte River Basin

16i. Mainstem of Sand Creek from the confluence with Toll Gate Creek to the confluence with the South Platte River.								
COSPUS16i	Classifications	Physical and Biological			Metals (ug/L)			
Designation	Agriculture		DM	MWAT				
_Reviewable	Aq Life Warm <u>21</u> <u>Water Supply</u>	Temperature °C	WS-II	WS-II	Aluminum	acute	chronic	
			acute	chronic	Arsenic	340	---	
Qualifiers:		D.O. (mg/L)	---	5.0	Arsenic(T)	---	<u>7.60_02</u>	
Fish Ingestion Standards		pH	6.5 - 9.0	---	Beryllium	---	---	
Other:		chlorophyll a (mg/m ²)	---	150*	Cadmium	TVS	TVS	
<u>Temporary Modification(s):</u>		E. Coli (per 100 mL)	---	126	<u>Cadmium(T)</u>	<u>5.0</u>	---	
<u>Arsenic(chronic) = hybrid</u>		Inorganic (mg/L)			Chromium III	<u>TVS---</u>	TVS	
<u>Expiration Date of 12/31/2024</u>			acute	chronic	Chromium III(T)	<u>---50</u>	<u>100---</u>	
Discharger Specific Variance(s):		Ammonia	TVS	TVS	Chromium VI	TVS	TVS	
Selenium(acute) = TVS: no limit		Boron	---	0.75	Copper	TVS	TVS	
Selenium(chronic) = 9: 24 µg/L		Chloride	---	<u>---250</u>	<u>Iron</u>	---	<u>WS</u>	
Expiration Date of 12/31/2023		Chlorine	0.019	0.011	Iron(T)	---	1000	
*chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 38.5(4).		Cyanide	0.005	---	Lead	TVS	TVS	
*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).		Nitrate	10	---	<u>Lead(T)</u>	<u>50</u>	---	
*Mercury(T)(chronic) = 0.026 below Brighton Blvd, see section 38.6(4)(f) for mercury assessment locations		Nitrite	<u>---0.5</u>	<u>0.5---</u>	Manganese	TVS	TVS <u>WS</u>	
Selenium(acute) = See section 38.6(4)(f) for selenium standards and assessment locations.		Phosphorus	---	0.17	Mercury(T)	---	0.01(†)	
*Selenium(chronic) = See section 38.6(4)(f) for selenium standards and assessment locations.		Sulfate	---	<u>---WS</u>	Mercury(T)	---	0.026(†)**	
<u>*Uranium(acute) = See 38.5(3) for details.</u>		Sulfide	---	0.002	Molybdenum(T)	---	150	
<u>*Uranium(chronic) = See 38.5(3) for details.</u>							Nickel	TVS
*Variance: Selenium = see 38.6(6) for details.							<u>Nickel(T)</u>	<u>---</u>
							Selenium	<u>---varies*</u>
							Selenium	<u>varies*---</u>
							Silver	TVS
							Uranium	<u>---varies*</u>
							Zinc	TVS

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

D.O. = dissolved oxygen
 DM = daily maximum
 MWAT = maximum weekly average temperature
 See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Upper South Platte River Basin

16j. Lee Gulch, Little's Creek, Big Dry Creek (Douglas and Arapahoe Counties), and Little Dry Creek, including all wetlands from the source to the confluence with the South Platte.						
COSPUS16J	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	acute chronic		
UP	Aq Life Warm 2	WS-II	WS-II	Aluminum	---	---
	Recreation E	acute	chronic	Arsenic	340	---
	Water Supply	---	5.0	Arsenic(T)	---	0.02-10 ^A
Qualifiers:						
Other:						
<p>*chlorophyll a (mg/m²)(chronic) = applies only above the facilities listed at 38.5(4). *Phosphorus(chronic) = applies only above the facilities listed at 38.5(4). *Selenium(acute) = See section 38.6(4)(h) for selenium standards and assessment locations. *Selenium(chronic) = See section 38.6(4)(h) for selenium standards and assessment locations. <u>*Uranium(acute) = See 38.5(3) for details.</u> <u>*Uranium(chronic) = See 38.5(3) for details.</u></p>						
		pH	6.5 - 9.0	---	Beryllium	---
		chlorophyll a (mg/m ²)	---	150*	Cadmium	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
		Boron	---	0.75	Copper	TVS
		Chloride	---	250	Iron	---
		Chlorine	0.019	0.011	Iron(T)	---
		Cyanide	0.005	---	Lead	TVS
		Nitrate	10	---	Lead(T)	50
		Nitrite	0.5	0.5	Manganese	TVS
		Phosphorus	---	0.17*	Mercury(T)	---
		Sulfate	---	WS	Molybdenum(T)	---
		Sulfide	---	0.002	Nickel	TVS
					Nickel(T)	---
					Selenium	varies*
					Silver	TVS
					Uranium	varies*
					Zinc	TVS

16k. Mainstem of Lakewood Gulch from the source to the confluence with the South Platte.						
COSPUS16K	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	acute chronic		
Reviewable	Aq Life Warm 1	WS-II	WS-II	Aluminum	---	---
	<u>Water Supply</u>	acute	chronic	Arsenic	340	---
	Recreation E	---	5.0	Arsenic(T)	---	7.60 02
Qualifiers:						
Other:						
<p><u>Temporary Modification(s):</u> <u>Arsenic(chronic) = hybrid</u> <u>Expiration Date of 12/31/2024</u></p> <p>*chlorophyll a (mg/m²)(chronic) = applies only above the facilities listed at 38.5(4). *Phosphorus(chronic) = applies only above the facilities listed at 38.5(4). <u>*Uranium(acute) = See 38.5(3) for details.</u> <u>*Uranium(chronic) = See 38.5(3) for details.</u></p>						
		pH	6.5 - 9.0	---	Beryllium	---
		chlorophyll a (mg/m ²)	---	150*	Cadmium	TVS
		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0
		Inorganic (mg/L)		Chromium III	TVS ---	TVS
		acute	chronic	Chromium III(T)	50	100 ---
		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	100 10	---	Lead(T)	50
		Nitrite	0.5	0.5	Manganese	TVS
		Phosphorus	---	0.17*	Mercury(T)	---
		Sulfate	---	WS	Molybdenum(T)	---
		Sulfide	---	0.002	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

D.O. = dissolved oxygen
 DM = daily maximum
 MWAT = maximum weekly average temperature
 See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Upper South Platte River Basin

17a. Washington Park Lakes, City Park Lakes, Rocky Mountain Lake, Berkely Lake.							
COSPUS17A	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT		acute	chronic	
Reviewable	Aq Life Warm 1 Recreation E	WL	WL	Aluminum	---	---	
Qualifiers:		acute	chronic	Arsenic	340	---	
Other:		D.O. (mg/L)	---	5.0	Arsenic(T)	---	7.6
		pH	6.5 - 9.0	---	Beryllium	---	---
		chlorophyll a (ug/L)	---	---	Cadmium	TVS	TVS
		E. Coli (per 100 mL)	---	126	Chromium III	TVS	TVS
		Inorganic (mg/L)			Chromium III(T)	---	100
		acute	chronic	Chromium VI	TVS	TVS	
		Ammonia	TVS	TVS	Copper	TVS	TVS
		Boron	---	0.75	Iron(T)	---	1000
		Chloride	---	---	Lead	TVS	TVS
		Chlorine	0.019	0.011	Manganese	TVS	TVS
		Cyanide	0.005	---	Mercury(T)	---	0.01(t)
		Nitrate	100	---	Molybdenum(T)	---	150
		Nitrite	---0.5	0.5---	Nickel	TVS	TVS
		Phosphorus	---	---	Selenium	TVS	TVS
		Sulfate	---	---	Silver	TVS	TVS
		Sulfide	---	0.002	Uranium	---varies*	---varies*
					Zinc	TVS	TVS

17b. Sloan's Lake.							
COSPUS17B	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT		acute	chronic	
Reviewable	Aq Life Warm 1 Recreation E	WL	WL	Aluminum	---	---	
Qualifiers:		acute	chronic	Arsenic	340	---	
Other:		D.O. (mg/L)	---	5.0	Arsenic(T)	---	7.6
		pH	6.5 - 9.0	---	Beryllium	---	---
		chlorophyll a (ug/L)	---	---	Cadmium	TVS	TVS
		E. Coli (per 100 mL)	---	126	Chromium III	TVS	TVS
		Inorganic (mg/L)			Chromium III(T)	---	100
		acute	chronic	Chromium VI	TVS	TVS	
		Ammonia	TVS	TVS	Copper	TVS	TVS
		Boron	---	0.75	Iron(T)	---	1000
		Chloride	---	---	Lead	TVS	TVS
		Chlorine	0.019	0.011	Manganese	TVS	TVS
		Cyanide	0.005	---	Mercury(T)	---	0.01(t)
		Nitrate	100	---	Molybdenum(T)	---	150
		Nitrite	---0.5	0.5---	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Upper South Platte River Basin

20. Lakes and reservoirs in the Plum Creek system within National Forest boundaries; and lakes and reservoirs in the Bear Creek drainage between the National Forest boundary and to the inlet of Perry Park Reservoir, a.k.a. Waucondah Reservoir (Douglas County).

COSPUS20	Classifications	Physical and Biological			Metals (ug/L)			
Designation	Agriculture	DM	MWAT	acute	chronic			
Reviewable	Aq Life Cold 1	CL	CL	---	---	Aluminum	---	
	Recreation E	acute	chronic	340	---	Arsenic	---	
	Water Supply	---	6.0	---	0.02	Arsenic(T)	---	
Qualifiers:		---	7.0	---	---	Beryllium	---	
Other:		6.5 - 9.0	---	TVS	TVS	Cadmium	TVS	
		---	---	5.0	---	Cadmium(T)	---	
		---	126	---	TVS	Chromium III	TVS	
		Inorganic (mg/L)			50	---	Chromium III(T)	---
		acute	chronic	TVS	TVS	Chromium VI	TVS	
		TVS	TVS	---	TVS	Copper	TVS	
		---	0.75	---	WS	Iron	WS	
		---	250	---	1000	Iron(T)	1000	
		0.019	0.011	TVS	TVS	Lead	TVS	
		0.005	---	50	---	Lead(T)	---	
		10	---	TVS	TVS/WS	Manganese	TVS	
		---	---	---	0.01(+)	Mercury(T)	0.01(+)	
		---	---	---	150	Molybdenum(T)	150	
		---	---	TVS	TVS	Nickel	TVS	
		---	WS	---	100	Nickel(T)	100	
		---	0.002	TVS	TVS	Selenium	TVS	
				TVS	TVS(tr)	Silver	TVS(tr)	
				---	---	Uranium	---	
				---	---	Zinc	TVS	

21. Lakes and reservoirs in the Plum Creek system except for specific listings in Segment 20.

COSPUS21	Classifications	Physical and Biological			Metals (ug/L)			
Designation	Agriculture	DM	MWAT	acute	chronic			
Reviewable	Aq Life Warm 2	WL	WL	---	---	Aluminum	---	
	Recreation E	acute	chronic	340	---	Arsenic	---	
	Water Supply	---	5.0	---	0.02-10 ^A	Arsenic(T)	0.02-10 ^A	
	DUWS*	---	---	---	---	Beryllium	---	
Qualifiers:		6.5 - 9.0	---	TVS	TVS	Cadmium	TVS	
Other:		---	---	5.0	---	Cadmium(T)	---	
		---	126	---	TVS	Chromium III	TVS	
		Inorganic (mg/L)			50	---	Chromium III(T)	---
		acute	chronic	TVS	TVS	Chromium VI	TVS	
		TVS	TVS	---	TVS	Copper	TVS	
		---	0.75	---	WS	Iron	WS	
		---	250	---	1000	Iron(T)	1000	
		0.019	0.011	TVS	TVS	Lead	TVS	
		0.005	---	---	---	Lead(T)	---	
		10	---	TVS	TVS/WS	Manganese	TVS	
		---	---	---	0.01(+)	Mercury(T)	0.01(+)	
		---	---	---	150	Molybdenum(T)	150	
		---	---	TVS	TVS	Nickel	TVS	
		---	WS	---	100	Nickel(T)	100	
		---	0.002	TVS	TVS	Selenium	TVS	
				TVS	TVS	Silver	TVS	
				---	---	Uranium	---	
				---	---	Zinc	TVS	

All metals are dissolved unless otherwise noted.

T = total recoverable
t = total
tr = trout

D.O. = dissolved oxygen

DM = daily maximum

MWAT = maximum weekly average temperature

See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Upper South Platte River Basin

22a. Lakes and reservoirs in watersheds tributary to the South Platte River from the outlet of Chatfield Reservoir to a point immediately below the confluence with Big Dry Creek, except for specific listings in the subbasins of the South Platte River, and in Segments 16b, 17a, 17b, 17c, 22b, and 23.

COSPUS22A	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute		chronic	
Reviewable	Aq Life Warm 2 Recreation E Water Supply DUWS*	WL	WL	Aluminum	---	---	
Qualifiers:		acute	chronic	Arsenic	340	---	
Water + Fish Standards		D.O. (mg/L)	---	5.0	Arsenic(T)	---	0.02
Other:		pH	6.5 - 9.0	---	Beryllium	---	---
Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2024 *Classification: DUWS applies to McLellan, <u>Marshall</u> and Quincy <u>Reservoirs</u> only. *Molybdenum(T)(chronic) = 210 ug/L for McLellan Reservoir <u>*Uranium(acute) = See 38.5(3) for details.</u> <u>*Uranium(chronic) = See 38.5(3) for details.</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	---	Lead(T)	50	---
		Nitrite	---	0.5	Manganese	TVS	TVS/WS
		Phosphorus	---	---	Mercury(T)	---	0.01(t)
		Sulfate	---	WS	Molybdenum(T)	---	150
		Sulfide	---	0.002	Molybdenum(T)	---	210*
					Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	---varies*	---varies*
					Zinc	TVS	TVS

22b. Lakes and reservoirs located in the Rocky Mountain Arsenal National Wildlife Refuge

COSPUS22B	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute		chronic	
Reviewable	Aq Life Warm 2 Recreation E	WL	WL	Aluminum	---	---	
Qualifiers:		acute	chronic	Arsenic	340	---	
Other:		D.O. (mg/L)	---	5.0	Arsenic(T)	---	100
		pH	6.5 - 9.0	---	Beryllium	---	---
		chlorophyll a (ug/L)	---	---	Cadmium	TVS	TVS
		E. Coli (per 100 mL)	---	126	Chromium III	TVS	TVS
		Inorganic (mg/L)		Chromium III(T)	---	100	
		acute	chronic	Chromium VI	TVS	TVS	
		Ammonia	TVS	TVS	Copper	TVS	TVS
		Boron	---	0.75	Iron(T)	---	1000
		Chloride	---	---	Lead	TVS	TVS
		Chlorine	0.019	0.011	Manganese	TVS	TVS
		Cyanide	0.005	---	Mercury(T)	---	0.01(t)
		Nitrate	100	---	Molybdenum(T)	---	150
		Nitrite	---	0.5	Nickel	TVS	TVS
		Phosphorus	---	---	Selenium	TVS	TVS
		Sulfate	---	---	Silver	TVS	TVS
		Sulfide	---	0.002	Uranium	---varies*	---varies*
					Zinc	TVS	TVS

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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Upper South Platte River Basin

23. Lakes and reservoirs in watersheds tributary to the Upper South Platte River and within the City and County of Denver, except for **specific** listings in the other subbasins of the South Platte River and in Segments 17a and 17b..

COSPUS23	Classifications	Physical and Biological			Metals (ug/L)		
Designation			DM	MWAT		acute	chronic
Reviewable	Agriculture						
	Aq Life Warm 2	Temperature °C	WL	WL	Aluminum	---	---
	<u>Water Supply</u>		acute	chronic	Arsenic	340	---
	Recreation E	D.O. (mg/L)	---	5.0	Arsenic(T)	---	<u>7.60,02-10</u> ^A
Qualifiers:		pH	6.5 - 9.0	---	Beryllium	---	---
Fish Ingestion Standards		chlorophyll a (ug/L)	---	---	Cadmium	TVS	TVS
Other:		E. Coli (per 100 mL)	---	126	<u>Cadmium(T)</u>	<u>5.0</u>	---
			Inorganic (mg/L)		Chromium III	<u>TVS---</u>	TVS
			acute	chronic	Chromium III(T)	<u>---50</u>	<u>100---</u>
		Ammonia	TVS	TVS	Chromium VI	TVS	TVS
		Boron	---	0.75	Copper	TVS	TVS
		Chloride	---	<u>---250</u> ⁻	<u>Iron</u>	---	<u>WS</u>
		Chlorine	0.019	0.011	Iron(T)	---	1000
		Cyanide	0.005	---	Lead	TVS	TVS
		Nitrate	<u>10010</u>	---	<u>Lead(T)</u>	<u>50</u>	---
		Nitrite	<u>---0.5</u> ⁻	<u>0.5---</u> ⁻	Manganese	TVS	TVS/ <u>WS</u>
		Phosphorus	---	---	Mercury(T)	---	0.01(†)
		Sulfate	---	<u>---WS</u> ⁻	Molybdenum(T)	---	150
		Sulfide	---	0.002	Nickel	TVS	TVS
					<u>Nickel(T)</u>	---	<u>100</u>
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	<u>---varies*</u>	<u>---varies*</u>
					Zinc	TVS	TVS

*See section 38.7 (Marston Forebay).

*Uranium(acute) = See 38.5(3) for details.

*Uranium(chronic) = See 38.5(3) for details.

All metals are dissolved unless otherwise noted.

T = total recoverable

t = total

tr = trout

D.O. = dissolved oxygen

DM = daily maximum

MWAT = maximum weekly average temperature

See 38.6 for further details on applied standards.

UPPER SOUTH PLATTE RIVER SEGMENT 15

Site-Specific Minimum Dissolved Oxygen and Ammonia Standards

UNDERLYING STANDARDS

Dissolved Oxygen

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

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

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

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

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

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

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

TEMPORARY MODIFICATION

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

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

Footnotes

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

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

Ammonia:

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

Ammonia

Warm Water = (mg/l as N) Total

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

$$chronic (Apr 1 - July 31) = \left(\frac{0.0577}{1 + 10^{7.688 - pH}} + \frac{2.487}{1 + 10^{pH - 7.688}} \right) * MIN \left(2.85, 1.45 * 10^{\frac{0.028(25 - T)}{10}} \right)$$

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

~~NH₃ = old TVS~~

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

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Cherry Creek Basin

1. Mainstem of Cherry Creek from the source of East and West Cherry Creek to the inlet of Cherry Creek Reservoir.						
COSPCH01	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	acute		chronic
Reviewable	Aq Life Warm <u>21</u>	Temperature °C	WS-II	WS-II	Aluminum	---
	Recreation E		acute	chronic	Arsenic	340
	Water Supply	D.O. (mg/L)	---	5.0	Arsenic(T)	---
Qualifiers:		pH	6.5 - 9.0	---	Beryllium	---
Other:		chlorophyll a (mg/m ²)	---	150*	Cadmium	TVS
	<u>Temporary Modification(s):</u>	E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0
	<u>Arsenic(chronic) = hybrid</u>	Inorganic (mg/L)			Chromium III	---
	<u>Expiration Date of 12/31/2024</u>	acute	chronic	Chromium III(T)	50	---
	*chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 38.5(4).	Ammonia	TVS	TVS	Chromium VI	TVS
	*Phosphorus(chronic) = effective 12/31/2020. Applies only above the facilities listed at 38.5(4).	Boron	---	0.75	Copper	TVS
	<u>*Uranium(acute) = See 38.5(3) for details.</u>	Chloride	---	250	Iron	---
	<u>*Uranium(chronic) = See 38.5(3) for details.</u>	Chlorine	0.019	0.011	Iron(T)	---
		Cyanide	0.005	---	Lead	TVS
		Nitrate	10	---	Lead(T)	50
		Nitrite	0.5	0.5	Manganese	TVS
		Phosphorus	---	0.17*	Mercury(T)	---
		Sulfate	---	WS	Molybdenum(T)	---
		Sulfide	---	0.002	Nickel	TVS
					Nickel(T)	---
					Selenium	TVS
					Silver	TVS
					Uranium	<u>varies*</u>
					Zinc	TVS
2. Cherry Creek Reservoir.						
COSPCH02	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	acute		chronic
Reviewable	Aq Life Warm 1	Temperature °C	WL	WL	Aluminum	---
	Recreation E		acute	chronic	Arsenic	340
	Water Supply	D.O. (mg/L)	---	5.0	Arsenic(T)	---
Qualifiers:		pH	6.5 - 9.0	---	Beryllium	---
Other:		chlorophyll a (ug/L)	7/1 - 9/30	---	Cadmium	TVS
	<u>Temporary Modification(s):</u>	E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0
	<u>Arsenic(chronic) = hybrid</u>	Inorganic (mg/L)			Chromium III	---
	<u>Expiration Date of 12/31/2024</u>	acute	chronic	Chromium III(T)	50	---
	*chlorophyll a (ug/L)(chronic) = Season mean concentration measured in the upper three meters of the water column for the months of July through September with an exceedance frequency of once in five years.	Ammonia	TVS	TVS	Chromium VI	TVS
	<u>*Uranium(acute) = See 38.5(3) for details.</u>	Boron	---	0.75	Copper	TVS
	<u>*Uranium(chronic) = See 38.5(3) for details.</u>	Chloride	---	250	Iron	---
		Chlorine	0.019	0.011	Iron(T)	---
		Cyanide	0.005	---	Lead	TVS
		Nitrate	10	---	Lead(T)	50
		Nitrite	0.5	0.5	Manganese	TVS
		Phosphorus	---	---	Mercury(T)	---
		Sulfate	---	WS	Molybdenum(T)	---
		Sulfide	---	0.002	Nickel	TVS
					Nickel(T)	---
					Selenium	TVS
					Silver	TVS
					Uranium	<u>varies*</u>
					Zinc	TVS

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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Cherry Creek Basin

3. Mainstem of Cherry Creek from the outlet of Cherry Creek Reservoir to the confluence with the South Platte River.							
COSPCH03	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT		acute	chronic	
Reviewable	Aq Life Warm <u>21</u>	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)	---	---	Cadmium	TVS	TVS
<u>Temporary Modification(s):</u>		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0	---
<u>Arsenic(chronic) = hybrid</u>		Inorganic (mg/L)			Chromium III	---	TVS
<u>Expiration Date of 12/31/2024</u>			acute	chronic	Chromium III(T)	50	---
<u>*Uranium(acute) = See 38.5(3) for details.</u>		Ammonia	TVS	TVS	Chromium VI	TVS	TVS
<u>*Uranium(chronic) = See 38.5(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	--0.5-	0.5---	Manganese	TVS	TVSWS
		Phosphorus	---	---	Mercury(T)	---	0.01(t)
		Sulfate	---	WS	Molybdenum(T)	---	150
		Sulfide	---	0.002	Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	varies*	-varies*
					Zinc	TVS	TVS

4a. All tributaries to Cherry Creek, including all wetlands, from the source of East and West Cherry Creeks to the confluence with the South Platte River except for <u>specific</u> -listings in Segment 4b.							
COSPCH04A	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	---
	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
<u>*chlorophyll a (mg/m²)(chronic) = applies only above the facilities listed at 38.5(4).</u>		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0	---
<u>*Phosphorus(chronic) = effective 12/31/2020. Applies only above the facilities listed at 38.5(4).</u>		Inorganic (mg/L)			Chromium III	---	TVS
<u>*Uranium(acute) = See 38.5(3) for details.</u>			acute	chronic	Chromium III(T)	50	---
<u>*Uranium(chronic) = See 38.5(3) for details.</u>		Ammonia	TVS	TVS	Chromium VI	TVS	TVS
		Boron	---	0.75	Copper	TVS	TVS
		Chloride	---	250	Iron	---	WS
		Chlorine	0.019	0.011	Iron(T)	---	1000
		Cyanide	0.005	---	Lead	TVS	TVS
		Nitrate	10	---	Lead(T)	50	---
		Nitrite	--0.5-	0.5---	Manganese	TVS	TVSWS
		Phosphorus	---	0.17*	Mercury(T)	---	0.01(t)
		Sulfate	---	WS	Molybdenum(T)	---	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Cherry Creek Basin

4b. Cottonwood Creek, including all tributaries and wetlands, from the source to Cherry Creek Reservoir.								
COSPCH04B	Classifications	Physical and Biological			Metals (ug/L)			
Designation		DM	MWAT		acute	chronic		
UP	Agriculture							
	Aq Life Warm <u>21</u>	Temperature °C	WS-II	WS-II	Aluminum	---	---	
	Recreation E				acute	chronic		
	Water Supply	D.O. (mg/L)	---	5.0	Arsenic	340	---	
Qualifiers:		pH	6.5 - 9.0	---	Arsenic(T)	---	0.02- 10 ^A	
Other:		chlorophyll a (mg/m ²)	---	150*	Beryllium	---	---	
*chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 38.5(4). *Phosphorus(chronic) = effective 12/31/2020. Applies only above the facilities listed at 38.5(4). *Selenium(acute) = See section 38.6(4)(i) for selenium standards and assessment locations. *Selenium(chronic) = See section 38.6(4)(i) for selenium standards and assessment locations. *Uranium(acute) = See 38.5(3) for details. *Uranium(chronic) = See 38.5(3) for details. Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2024		Inorganic (mg/L)			Cadmium	TVS	TVS	
				acute	chronic	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	--0.5-	0.5---	Lead	TVS	TVS	
		Phosphorus	---	0.17*	Lead(T)	50	---	
		Sulfate	---	WS	Manganese	TVS	TVS/WS	
		Sulfide	---	0.002	Mercury(T)	---	0.01(†)	
					Molybdenum(T)	---	150	
					Nickel	TVS	TVS	
					Nickel(T)	---	100	
			Selenium	varies*	varies*			
			Silver	TVS	TVS			
			Uranium	varies*	varies*			
			Zinc	TVS	TVS			

5. Lakes and reservoirs in the Cherry Creek system from the source of East and West Cherry Creeks to the confluence with the South Platte River, except for specific -listings in Segments <u>2_6</u> and <u>67</u> .								
COSPCH05	Classifications	Physical and Biological			Metals (ug/L)			
Designation		DM	MWAT		acute	chronic		
Reviewable	Agriculture							
	Aq Life Warm 2	Temperature °C	WL	WL	Aluminum	---	---	
	Recreation E				acute	chronic		
	Water Supply	D.O. (mg/L)	---	5.0	Arsenic	340	---	
Qualifiers:		pH	6.5 - 9.0	---	Arsenic(T)	---	0.02- 10 ^A	
Water + Fish Standards		chlorophyll a (ug/L)	---	20*	Beryllium	---	---	
Other:		E. Coli (per 100 mL)	---	126	Cadmium	TVS	TVS	
*chlorophyll a (ug/L)(chronic) = applies only above the facilities listed at 38.5(4), applies only to lakes and reservoirs larger than 25 acres surface area. *Phosphorus(chronic) = applies only above the facilities listed at 38.5(4), applies only to lakes and reservoirs larger than 25 acres surface area. *Uranium(acute) = See 38.5(3) for details. *Uranium(chronic) = See 38.5(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	--0.5-	0.5---	Manganese	TVS	TVS/WS	
		Phosphorus	---	0.083*	Mercury(T)	---	0.01(†)	
		Sulfate	---	WS	Molybdenum(T)	---	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

D.O. = dissolved oxygen
 DM = daily maximum
 MWAT = maximum weekly average temperature
 See 38.6 for further details on applied standards.

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

6. Lakes and reservoirs in watersheds tributary to Cherry Creek within the City and County of Denver.						
COSPCH06	Classifications	Physical and Biological		Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute	chronic	
Reviewable	Aq Life Warm 2 Recreation E	WL	WL	Aluminum	---	
Qualifiers:	Fish Ingestion Standards	acute	chronic	Arsenic	340	
		D.O. (mg/L)	---	5.0	Arsenic(T)	---
Other:	*Uranium(acute) = See 38.5(3) for details. *Uranium(chronic) = See 38.5(3) for details.	pH	6.5 - 9.0	---	Beryllium	---
		chlorophyll a (ug/L)	---	---	Cadmium	TVS
		Inorganic (mg/L)		Chromium III	TVS	
		acute	chronic	Chromium III(T)	---	
		Ammonia	TVS	TVS	Chromium VI	TVS
		Boron	---	0.75	Copper	TVS
		Chloride	---	---	Iron(T)	---
		Chlorine	0.019	0.011	Lead	TVS
		Cyanide	0.005	---	Manganese	TVS
		Nitrate	100	---	Mercury(T)	---
		Nitrite	---0.5	0.5---	Molybdenum(T)	---
		Phosphorus	---	---	Nickel	TVS
		Sulfate	---	---	Selenium	TVS
		Sulfide	---	0.002	Silver	TVS
					Uranium	varies*
					Zinc	TVS

7. Rueter-Hess Reservoir						
COSPCH07	Classifications	Physical and Biological		Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute	chronic	
Reviewable	Aq Life Warm 1 Recreation E Water Supply DUWS	WL	WL	Arsenic	340	
Qualifiers:	Other:	acute	chronic	Arsenic(T)	---	
		D.O. (mg/L)	---	5.0	Cadmium	TVS
Other:	Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2024 *Uranium(acute) = See 38.5(3) for details. *Uranium(chronic) = See 38.5(3) for details.	pH	6.5 - 9.0	---	Cadmium(T)	5.0
		chlorophyll a (ug/L)	---	20	Chromium III	---
		E. Coli (per 100 mL)	---	126	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	0.5	---	Molybdenum(T)	---
		Phosphorus	---	0.083	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Bear Creek Basin

1a. Mainstem of Bear Creek from the boundary of the Mt. Evans Wilderness area to the inlet of Evergreen Lake.							
COSPBE01A	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	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 12/31/2024					Chromium III(T)	50	---
*chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 38.5(4). *Phosphorus(chronic) = applies only above the facilities listed at 38.5(4). <u>*Uranium(acute) = See 38.5(3) for details.</u> <u>*Uranium(chronic) = See 38.5(3) for details.</u>		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	<u>---0.05</u>	<u>0.05---</u>	Molybdenum(T)	---	150
		Phosphorus	---	0.11*	Nickel	TVS	TVS
		Sulfate	---	WS	Nickel(T)	---	100
		Sulfide	---	0.002	Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	<u>varies*</u>	<u>varies*</u>
					Zinc	TVS	TVS

1b. Mainstem of Bear Creek from Harriman Ditch to the inlet of Bear Creek Reservoir.								
COSPBE01B	Classifications	Physical and Biological			Metals (ug/L)			
Designation	Agriculture	DM	MWAT		acute	chronic		
Reviewable	Aq Life Cold <u>21</u>	Temperature °C	<u>11/1-3/31</u>	<u>CS-IIvaries*</u>	<u>CS-IIvaries*</u>	Aluminum	---	---
	Recreation E	Temperature °C	<u>4/1-10/31</u>	<u>CS-II</u>	<u>19.3</u>	Arsenic	340	---
	Water Supply					Arsenic(T)	---	0.02
Qualifiers:						Beryllium	---	---
Water + Fish Standards		D.O. (mg/L)	---	6.0	Cadmium	TVS	TVS	
Other:		D.O. (spawning)	---	7.0	Cadmium(T)	5.0	---	
Temporary Modification(s):		pH	6.5 - 9.0	---	Chromium III	---	TVS	
Arsenic(chronic) = hybrid		chlorophyll a (mg/m ²)	---	---	Chromium III(T)	50	---	
Expiration Date of 12/31/2024		E. Coli (per 100 mL)	---	126	Chromium VI	TVS	TVS	
*Uranium(acute) = See 38.5(3) for details. *Uranium(chronic) = See 38.5(3) for details. <u>*Temperature =</u> <u>DM=CS-II and MWAT=CS-II from 11/1-3/31</u> <u>DM=CS-II and MWAT= 19.3 from 4/1-10/31</u>		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)	---	150	
		Nitrite	<u>---0.05</u>	<u>0.05---</u>	Nickel	TVS	TVS	
		Phosphorus	---	---	Nickel(T)	---	100	
		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

D.O. = dissolved oxygen
 DM = daily maximum
 MWAT = maximum weekly average temperature
 See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Bear Creek Basin

1e. Mainstem of Bear Creek from the outlet of Evergreen Lake to the Harriman Ditch.							
COSPBE01E	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute	chronic		
Reviewable	Aq Life Cold 1	Temperature °C	11/1 - 3/31 CS- #varies*	CS- #varies*	Aluminum	---	---
	Recreation E	Temperature °C	4/1 - 10/31	CS-II	19.3	Arsenic	340
Water Supply					Arsenic(T)	---	0.02
					Beryllium	---	---
Qualifiers:		acute	chronic	Cadmium	TVS	TVS	
Other:		D.O. (mg/L)	---	6.0	Cadmium(T)	5.0	---
Temporary Modification(s):		D.O. (spawning)	---	7.0	Chromium III	---	TVS
Arsenic(chronic) = hybrid		pH	6.5 - 9.0	---	Chromium III(T)	50	---
Expiration Date of 12/31/2024		chlorophyll a (mg/m ²)	---	---	Chromium VI	TVS	TVS
*Uranium(acute) = See 38.5(3) for details.		E. Coli (per 100 mL)	---	126	Copper	TVS	TVS
*Uranium(chronic) = See 38.5(3) for details.		Inorganic (mg/L)			Iron	---	WS
*Temperature =			acute	chronic	Iron(T)	---	1000
DM=CS-II and MWAT=CS-II from 11/1-3/31		Ammonia	TVS	TVS	Lead	TVS	TVS
DM=CS-II and MWAT= 19.3 from 4/1-10/31		Boron	---	0.75	Lead(T)	50	---
		Chloride	---	250	Manganese	TVS	TVS/WS
		Chlorine	0.019	0.011	Mercury(T)	---	0.01(†)
		Cyanide	0.005	---	Molybdenum(T)	---	150
		Nitrate	10	---	Nickel	TVS	TVS
		Nitrite	---0.05	0.05---	Nickel(T)	---	100
		Phosphorus	---	---	Selenium	TVS	TVS
		Sulfate	---	WS	Silver	TVS	TVS(tr)
		Sulfide	---	0.002	Uranium	varies*	varies*
					Zinc	TVS	TVS

2. Mainstem of Bear Creek from the outlet of Bear Creek Reservoir to the confluence with the South Platte River.							
COSPBE02	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 12/31/2024		Ammonia	TVS	TVS	Chromium VI	TVS	TVS
*Uranium(acute) = See 38.5(3) for details.		Boron	---	0.75	Copper	TVS	TVS
*Uranium(chronic) = See 38.5(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	---0.5	0.5---	Manganese	TVS	TVS/WS
		Phosphorus	---	---	Mercury(T)	---	0.01(†)
		Sulfate	---	WS	Molybdenum(T)	---	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Bear Creek Basin

3. All tributaries to Bear Creek, including all wetlands, from the source to the outlet of Evergreen Lake. Except, except for specific listings in Segment 7.						
COSPBE03	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	CS-I	CS-I	Arsenic	---
		D.O. (mg/L)	---	6.0	Arsenic(T)	---
		D.O. (spawning)	---	7.0	Beryllium	---
Qualifiers:		pH	6.5 - 9.0	---	Cadmium	TVS
Other:		chlorophyll a (mg/m ²)	---	150*	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 12/31/2024		Ammonia	TVS	TVS	Chromium VI	TVS
*chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 38.5(4).		Boron	---	0.75	Copper	TVS
*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).		Chloride	---	250	Iron	---
<u>*Uranium(acute) = See 38.5(3) for details.</u>		Chlorine	0.019	0.011	Iron(T)	---
<u>*Uranium(chronic) = See 38.5(3) for details.</u>		Cyanide	0.005	---	Lead	TVS
		Nitrate	10	---	Lead(T)	50
		Nitrite	--0.05-	0.05---	Manganese	TVS
		Phosphorus	---	0.11*	Mercury(T)	---
		Sulfate	---	WS	Molybdenum(T)	---
		Sulfide	---	0.002	Nickel	TVS
					Nickel(T)	---
					Selenium	TVS
					Silver	TVS
					Uranium	-varies*
					Zinc	TVS
						TVS

4a4. All tributaries to Bear Creek, including all wetlands, from the outlet of Evergreen Lake to the confluence with the South Platte River, except for specific listings in Segments 5, 6a, and 6b.						
COSPBE04	COSPBE04 Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	acute chronic		
Reviewable	Aq Life Warm 2 Recreation E Water Supply	acute	chronic	Aluminum	---	---
		Temperature °C	WS-I	WS-I	Arsenic	---
		D.O. (mg/L)	---	5.0	Arsenic(T)	---
Qualifiers:		pH	6.5 - 9.0	---	Beryllium	---
Water + Fish Standards		chlorophyll a (mg/m ²)	---	---	Cadmium	TVS
Other:		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0
Temporary Modification(s):		Inorganic (mg/L)			Chromium III	---
Arsenic(chronic) = hybrid		Ammonia	TVS	TVS	Chromium III(T)	50
Expiration Date of 12/31/2024		Boron	---	0.75	Chromium VI	TVS
*Uranium(acute) = See 38.5(3) for details.		Chloride	---	250	Copper	TVS
*Uranium(chronic) = See 38.5(3) for details.		Chlorine	0.019	0.011	Iron	---
		Cyanide	0.005	---	Iron(T)	---
		Nitrate	10	---	Lead	TVS
		Nitrite	--0.5-	0.5---	Lead(T)	50
		Phosphorus	---	---	Manganese	TVS
		Sulfate	---	WS	Mercury(T)	---
		Sulfide	---	0.002	Molybdenum(T)	---
					Nickel	TVS
					Nickel(T)	---
					Selenium	TVS
					Silver	TVS
					Uranium	-varies*
					Zinc	TVS
						TVS

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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

**REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS
Bear Creek Basin**

4b- Deleted.

COSPBE04B	Classifications	Physical and Biological		Metals (ug/L)	
Designation		DM	MWAT	acute	chronic
Reviewable					
Qualifiers:		acute	chronic		
Other:					
		Inorganic (mg/L)			
		acute	chronic		

4c- Deleted.

COSPBE04C	Classifications	Physical and Biological		Metals (ug/L)	
Designation		DM	MWAT	acute	chronic
Reviewable					
Qualifiers:		acute	chronic		
Other:					
		Inorganic (mg/L)			
		acute	chronic		

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

D.O. = dissolved oxygen
 DM = daily maximum
 MWAT = maximum weekly average temperature
 See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Bear Creek Basin

5. Swede, Kerr, Sawmill, Troublesome, and Cold Springs Gulches, and mainstem of Cub Creek from the source to the confluence with Bear Creek.									
COSPBE05	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		
Qualifiers:		D.O. (spawning)	---	7.0	Beryllium	---	---		
Water + Fish Standards		pH	6.5 - 9.0	---	Cadmium	TVS	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 12/31/2024					Chromium VI	TVS	TVS		
*chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 38.5(4). *Phosphorus(chronic) = applies only above the facilities listed at 38.5(4). <u>*Uranium(acute) = See 38.5(3) for details.</u> <u>*Uranium(chronic) = See 38.5(3) for details.</u>		Inorganic (mg/L)			Copper	TVS	TVS		
		acute	chronic	Ammonia	TVS	TVS	Iron	---	WS
		---	0.75	Boron	---	0.75	Iron(T)	---	1000
		---	250	Chloride	---	250	Lead	TVS	TVS
		0.019	0.011	Chlorine	0.019	0.011	Lead(T)	50	---
		0.005	---	Cyanide	0.005	---	Manganese	TVS	TVS/WS
		10	---	Nitrate	10	---	Mercury(T)	---	0.01(†)
		---	0.05	Nitrite	---	0.05	Molybdenum(T)	---	150
		---	0.11*	Phosphorus	---	0.11*	Nickel	TVS	TVS
		---	WS	Sulfate	---	WS	Nickel(T)	---	100
		---	0.002	Sulfide	---	0.002	Selenium	TVS	TVS
							Silver	TVS	TVS(tr)
							Uranium	varies*	varies*
							Zinc	TVS	TVS

6a. Turkey Creek system, including all tributaries and wetlands, from the source to the inlet of Bear Creek Reservoir, except for specific-listings in Segment 6b.									
COSPBE06A	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		
Qualifiers:		D.O. (spawning)	---	7.0	Beryllium	---	---		
Water + Fish Standards		pH	6.5 - 9.0	---	Cadmium	TVS	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 12/31/2024					Chromium VI	TVS	TVS		
*chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 38.5(4). *Phosphorus(chronic) = applies only above the facilities listed at 38.5(4). <u>*Uranium(acute) = See 38.5(3) for details.</u> <u>*Uranium(chronic) = See 38.5(3) for details.</u>		Inorganic (mg/L)			Copper	TVS	TVS		
		acute	chronic	Ammonia	TVS	TVS	Iron	---	WS
		---	0.75	Boron	---	0.75	Iron(T)	---	1000
		---	250	Chloride	---	250	Lead	TVS	TVS
		0.019	0.011	Chlorine	0.019	0.011	Lead(T)	50	---
		0.005	---	Cyanide	0.005	---	Manganese	TVS	TVS/WS
		10	---	Nitrate	10	---	Mercury(T)	---	0.01(†)
		---	0.05	Nitrite	---	0.05	Molybdenum(T)	---	150
		---	0.11*	Phosphorus	---	0.11*	Nickel	TVS	TVS
		---	WS	Sulfate	---	WS	Nickel(T)	---	100
		---	0.002	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

D.O. = dissolved oxygen
 DM = daily maximum
 MWAT = maximum weekly average temperature
 See 38.6 for further details on applied standards.

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

8. Lakes and reservoirs in the Bear Creek system from the sources to the boundary of the Mt. Evans Wilderness area.						
COSPBE08	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture Aq Life Cold 1 Recreation E Water Supply	DM	MWAT	acute chronic		
OW	Temperature °C	CL	CL	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	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	---	TVS
*Phosphorus(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area.	Inorganic (mg/L)			Chromium III(T)	50	---
*Uranium(acute) = See 38.5(3) for details.				Chromium VI	TVS	TVS
*Uranium(chronic) = See 38.5(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)	---	150
	Phosphorus	---	0.025*	Nickel	TVS	TVS
	Sulfate	---	WS	Nickel(T)	---	100
	Sulfide	---	0.002	Selenium	TVS	TVS
				Silver	TVS	TVS(tr)
				Uranium	aries*	aries*
				Zinc	TVS	TVS
9. Lakes and reservoirs in the Bear Creek system from the boundary of the Mt. Evans Wilderness area to the inlet of Evergreen Lake; includes Summit Lake.						
COSPBE09	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture Aq Life Cold 1 Recreation E Water Supply	DM	MWAT	acute chronic		
Reviewable	Temperature °C	CL	CL	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	TVS
Other:	chlorophyll a (ug/L)	---	8*	Cadmium(T)	5.0	---
*chlorophyll a (ug/L)(chronic) = applies only above the facilities listed at 38.5(4), applies only to lakes and reservoirs larger than 25 acres surface area.	E. Coli (per 100 mL)	---	126	Chromium III	---	TVS
*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4), applies only to lakes and reservoirs larger than 25 acres surface area.	Inorganic (mg/L)			Chromium III(T)	50	---
*Uranium(acute) = See 38.5(3) for details.		acute	chronic	Chromium VI	TVS	TVS
*Uranium(chronic) = See 38.5(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)	50	---
	Nitrate	10	---	Manganese	TVS	TVS/WS
	Nitrite	---0.05	0.05---	Mercury(T)	---	0.01(†)
	Phosphorus	---	0.025*	Molybdenum(T)	---	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Bear Creek Basin

10. Lakes and reservoirs in drainages of Swede Gulch, Sawmill Gulch, Troublesome Gulch, and Cold Springs Gulch from source to confluence with Bear Creek.							
COSPBE10	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT		acute	chronic	
Reviewable	Aq Life Cold 2	Temperature °C	CL	CL	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	---	---
Water + Fish Standards		pH	6.5 - 9.0	---	Cadmium	TVS	TVS
Other:		chlorophyll a (ug/L)	---	---	Cadmium(T)	5.0	---
*Uranium(acute) = See 38.5(3) for details. *Uranium(chronic) = See 38.5(3) for details.		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	---	---	Molybdenum(T)	---	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

11. Lakes and reservoirs in the Bear Creek system from the outlet of Evergreen Lake to the confluence with the South Platte River, except as specified for lakes and reservoirs in Segments 1c, 10, and 12; includes Soda Lakes.							
COSPBE11	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT		acute	chronic	
Reviewable	Aq Life Warm 2	Temperature °C	WL	WL	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	---	---
Water + Fish Standards		chlorophyll a (ug/L)	---	---	Cadmium	TVS	TVS
Other:		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0	---
Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2024 *Uranium(acute) = See 38.5(3) for details. *Uranium(chronic) = See 38.5(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	---0.5	0.5---	Manganese	TVS	TVS/WS
		Phosphorus	---	---	Mercury(T)	---	0.01(†)
		Sulfate	---	WS	Molybdenum(T)	---	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

D.O. = dissolved oxygen
 DM = daily maximum
 MWAT = maximum weekly average temperature
 See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Clear Creek Basin

1. Mainstem of Clear Creek, including all tributaries and wetlands, from the source to the I-70 bridge above Silver Plume.							
COSPCL01	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
		D.O. (spawning)	---	7.0	Beryllium	---	---
Qualifiers:		pH	6.5 - 9.0	---	Cadmium	TVS	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 12/31/2024					Chromium VI	TVS	TVS
*chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 38.5(4).					Copper	TVS	TVS
*Designation: 9/30/00 Baseline does not apply					Iron	---	WS
*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).					Iron(T)	---	1000
*Uranium(acute) = See 38.5(3) for details.					Lead	TVS	TVS
*Uranium(chronic) = See 38.5(3) for details.					Lead(T)	50	---
					Manganese	TVS	TVSWS
					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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Clear Creek Basin

2a. Mainstem of Clear Creek, including all tributaries and wetlands, from the I-70 bridge above Silver Plume to a point just above the confluence with West Fork Clear Creek, except for <u>specific</u> listings in Segments 3a and 3b.							
COSPCL02A	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute		chronic	
Reviewable*	Aq Life Cold 1	Temperature °C	CS-I	CS-I	Aluminum	---	
	Recreation E		acute	chronic	Arsenic	340	
	Water Supply	D.O. (mg/L)	---	6.0	Arsenic(T)	---	
Qualifiers:		D.O. (spawning)	---	7.0	Beryllium	---	
Other:		pH	6.5 - 9.0	---	Cadmium	TVS	
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	
		Inorganic (mg/L)			Chromium VI	TVS	TVS
			acute	chronic	Copper	TVS	TVS
*chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 38.5(4).		Ammonia	TVS	TVS	Iron	---	WS
*Designation: 9/30/00 Baseline does not apply		Boron	---	0.75	Iron(T)	---	1000
*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).		Chloride	---	250	Lead	TVS	TVS
*Uranium(acute) = See 38.5(3) for details.		Chlorine	0.019	0.011	Lead(T)	50	---
*Uranium(chronic) = See 38.5(3) for details.		Cyanide	0.005	---	Manganese	TVS	TVS/WS
*Zinc(acute) = 0.978e^(0.8537[ln(hardness)]+1.9467)		Nitrate	10	---	Mercury(T)	---	0.01(t)
*Zinc(chronic) = 0.986e^(0.8537[ln(hardness)]+1.8032)		Nitrite	---0.05	0.05---	Molybdenum(T)	---	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	---	SSE*
					Zinc	SSE*	---

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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Clear Creek Basin

2b. Mainstem of Clear Creek, including all tributaries and wetlands, from the confluence with West Fork Clear Creek to a point just below the confluence with Mill Creek, except for ~~specific~~ listings in Segments 4 through 8.

COSPCL02B	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	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 12/31/2024					Chromium III(T)	50	---
*chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 38.5(4).					Chromium VI	TVS	TVS
*Designation: 9/30/00 Baseline does not apply					Copper	TVS	TVS
*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).					Iron	---	WS
*Uranium(acute) = See 38.5(3) for details.					Iron(T)	---	1000
*Uranium(chronic) = See 38.5(3) for details.					Lead	TVS	TVS
					Lead(T)	50	---
					Manganese	TVS	TVS/WS
					Mercury(I)	---	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Clear Creek Basin

2c. Mainstem of Clear Creek, including all tributaries and wetlands, from a point just below the confluence with Mill Creek to a point just above the Argo Tunnel discharge, except for <u>specific</u> listings in Segments 9a, 9b, and 10.						
COSPCL02C	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)	---	0.02
Qualifiers:		D.O. (spawning)	7.0	Beryllium	---	---
Other:		pH	6.5 - 9.0	Cadmium	TVS	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 12/31/2024				Chromium III(T)	50	---
*chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 38.5(4).		Inorganic (mg/L)		Chromium VI	TVS	TVS
*Designation: 9/30/00 Baseline does not apply		acute	chronic	Copper	TVS	TVS
*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).		Ammonia	TVS	Iron	---	WS
*Uranium(acute) = See 38.5(3) for details.		Boron	0.75	Iron(T)	---	1000
*Uranium(chronic) = See 38.5(3) for details.		Chloride	250	Lead	TVS	TVS
*Zinc(acute) = 0.978e^(0.8537[ln(hardness)]+1.9467)		Chlorine	0.019	Lead(T)	50	---
*Zinc(chronic) = 0.986e^(0.8537[ln(hardness)]+1.8032)		Cyanide	0.005	Manganese	TVS	TVS/WS
		Nitrate	10	Mercury(T)	---	0.01(t)
		Nitrite	0.05	Molybdenum(T)	---	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	SSE*	---
				Zinc	---	SSE*

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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Clear Creek Basin

3a. Mainstem of South Clear Creek, including all tributaries and wetlands, from the source to the confluence with Clear Creek, except for the <i>specific</i> listings in Segments 3b and 19.											
COSPCL03A	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	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 12/31/2024					Chromium III(T)	50	---				
*Designation: 9/30/00 Baseline does not apply					Inorganic (mg/L)		Chromium VI	TVS	TVS		
*Uranium(acute) = See 38.5(3) for details.									Copper	TVS	TVS
*Uranium(chronic) = See 38.5(3) for details.									Iron	---	WS
*Zinc(acute) = 0.978e^(0.8537[ln(hardness)]+1.9467)		Ammonia	TVS	TVS	Iron(T)	---	1000	Lead	TVS	TVS	
*Zinc(chronic) = 0.986e^(0.8537[ln(hardness)]+1.8032)		Boron	---	0.75	Lead(T)	50	---	Manganese	TVS	TVSWS	
		Chloride	---	250	Mercury(T)	---	0.01(†)	Molybdenum(T)	---	150	
		Chlorine	0.019	0.011	Nickel	TVS	TVS	Nickel(T)	---	100	
		Cyanide	0.005	---	Selenium	TVS	TVS	Silver	TVS	TVS(tr)	
		Nitrate	10	---	Uranium	---varies*	---varies*	Zinc	---	SSE*	
		Nitrite	---0.05	0.05---	Zinc	SSE*	---				
		Phosphorus	---	0.11							
		Sulfate	---	WS							
		Sulfide	---	0.002							

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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Clear Creek Basin

4. Mainstem of West Fork Clear Creek from the source to the confluence with Woods Creek.							
COSPCL04	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
		D.O. (spawning)	---	7.0	Beryllium	---	---
Qualifiers:		pH	6.5 - 9.0	---	Cadmium	TVS	TVS
Other:	*Designation: 9/30/00 Baseline does not apply *Uranium(acute) = See 38.5(3) for details. *Uranium(chronic) = See 38.5(3) for details.	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	TVSWS
		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		

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

D.O. = dissolved oxygen
 DM = daily maximum
 MWAT = maximum weekly average temperature
 See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Clear Creek Basin

5. Mainstem of West Fork Clear Creek from the confluence with Woods Creek to the confluence with Clear Creek.						
COSPCL05	Classifications	Physical and Biological			Metals (ug/L)	
Designation			DM	MWAT		
Reviewable	Agriculture				acute	chronic
	Aq Life Cold 1	Temperature °C	CS-I	CS-I	Aluminum	---
	Recreation E		acute	chronic	Arsenic	340
	Water Supply	D.O. (mg/L)	---	6.0	Arsenic(T)	---
		D.O. (spawning)	---	7.0	Beryllium	---
Qualifiers:		pH	6.5 - 9.0	---	Cadmium	TVS
Other:		chlorophyll a (mg/m ²)	---	150*	Cadmium(T)	5.0
Temporary Modification(s):		E. Coli (per 100 mL)	---	126	Chromium III	---
Arsenic(chronic) = hybrid					Chromium III(T)	50
Expiration Date of 12/31/2024					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	---
					Zinc	SSE*

*chlorophyll a (mg/m²)(chronic) = applies only above the facilities listed at 38.5(4).
 *Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).
 *Manganese(chronic) = 393 ug/L at the mouth of West Fork, and 1480 ug/L below Woods Creek, see section 38.6(4)(j) for manganese assessment locations. Chronic TVS applies throughout segment.
*Uranium(acute) = See 38.5(3) for details.
*Uranium(chronic) = See 38.5(3) for details.
 *Zinc(acute) = e^(0.8404[ln(hardness)]+1.8810)
 *Zinc(chronic) = e^(0.8404[ln(hardness)]+1.5127)

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	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	varies*
Mercury(T)	---	0.01(†)
Molybdenum(T)	---	210
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

D.O. = dissolved oxygen
 DM = daily maximum
 MWAT = maximum weekly average temperature
 See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Clear Creek Basin

9a. Mainstem of Fall River, including all tributaries and wetlands, from the source to the confluence with Clear Creek.							
COSPCL09A	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	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 12/31/2024		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)	---	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
9b. Mainstem of Trail Creek, including all tributaries and wetlands from the source to the confluence with Clear Creek.							
COSPCL09B	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	TVS	
*Designation: 9/30/00 Baseline does not apply		chlorophyll a (mg/m ²)	---	150	Cadmium(T)	5.0	---
*Uranium(acute) = See 38.5(3) for details.		E. Coli (per 100 mL)	---	126	Chromium III	---	TVS
*Uranium(chronic) = See 38.5(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	TVS/WS
		Nitrite	-0.05	0.05---	Mercury(T)	---	0.01(†)
		Phosphorus	---	0.11	Molybdenum(T)	---	150
		Sulfate	---	WS	Nickel	TVS	TVS
		Sulfide	---	0.002	Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	varies*	varies*
					Zinc	TVS	200

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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Clear Creek Basin

10. Mainstem of Chicago Creek, including all tributaries and wetlands, from the source to the confluence with Clear Creek, except for specific listings in Segment 19.							
COSPCL10	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	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 12/31/2024					Chromium III(T)	50	---
*chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 38.5(4). *Designation: 9/30/00 Baseline does not apply *Phosphorus(chronic) = applies only above the facilities listed at 38.5(4). *Uranium(acute) = See 38.5(3) for details. *Uranium(acute) = See 38.5(3) for details.		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)	---	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
11. Mainstem of Clear Creek from a point just above the Argo Tunnel discharge to the Farmers Highline Canal diversion in Golden, Colorado.							
COSPCL11	Classifications	Physical and Biological			Metals (ug/L)		
Designation	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	TVS	TVS
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 12/31/2024					Chromium III(T)	50	---
*Uranium(acute) = See 38.5(3) for details. *Uranium(chronic) = See 38.5(3) for details. *Zinc(acute) = 0.978e^(0.8537[ln(hardness)]+1.9467) *Zinc(chronic) = 0.986e^(0.8537[ln(hardness)]+1.8032)		Inorganic (mg/L)			Chromium VI	TVS	TVS
			acute	chronic	Copper	---	17
		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)	---	150
		Phosphorus	---	---	Nickel	TVS	TVS
		Sulfate	---	WS	Nickel(T)	---	100
		Sulfide	---	0.002	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Clear Creek Basin

12a. All tributaries to Clear Creek, including all wetlands, from the Argo Tunnel discharge to the Farmers Highline Canal diversion in Golden, Colorado, except for ~~specific~~ listings in Segments 12b, 13a and 13b.

COSPCL12A	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	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)	---	150
					Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	--varies*	--varies*
					Zinc	TVS	TVS

12b. Beaver Brook, from the source to Highway 40 the confluence with Soda Creek, and Soda Creek, from the source to the confluence with Clear Creek.

COSPCL12B	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	0.02---
	Water Supply	D.O. (mg/L)	---	6.0	Beryllium	---	--0.02
Qualifiers:		D.O. (spawning)	---	7.0	Arsenic(T)	---	---
Other:		pH	6.5 - 9.0	---	Cadmium	TVS	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)	---	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Clear Creek Basin

13a. Mainstem of North Clear Creek, including all tributaries and wetlands, from its source to its confluence with Chase Gulch, and Four Mile Gulch, including all tributaries and wetlands, from their sources to their confluence with North Clear Creek and Eureka Gulch, including all tributaries and wetlands, from its source to its confluence with Gregory Gulch.

COSPCL13A	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	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 12/31/2024					Chromium III(T)	50	---
					Chromium VI	TVS	TVS
*Designation: 9/30/00 Baseline does not apply					Copper	TVS	TVS
<u>*Uranium(acute) = See 38.5(3) for details.</u>					Iron	---	WS
<u>*Uranium(chronic) = See 38.5(3) for details.</u>					Iron(T)	---	1000
					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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

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

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

COSPCL13B	Classifications	Physical and Biological			Metals (ug/L)		
		DM	MWAT		acute	chronic	
UP	Agriculture						
	Aq Life Cold 2	Temperature °C	CS-I	CS-I	Aluminum	---	---
	<u>Water Supply</u>		acute	chronic	Arsenic	340	---
	Recreation E	D.O. (mg/L)	---	6.0	Arsenic(T)	---	<u>1000.02</u>
Qualifiers:	<u>Water + Fish Standards</u>	D.O. (spawning)	---	7.0	Beryllium	---	---
		pH	6.5 - 9.0	---	Cadmium	TVS	TVS
Other:	Temporary Modification(s): <u>Arsenic(chronic) = hybrid</u> <u>Expiration Date of 12/31/2024</u> <u>temperature(DM/MWAT) = current condition</u> Expiration Date of 12/31/2020 *chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 38.5(4). *Phosphorus(chronic) = applies only above the facilities listed at 38.5(4). <u>*Uranium(acute) = See 38.5(3) for details.</u> <u>*Uranium(chronic) = See 38.5(3) for details.</u>	chlorophyll a (mg/m ²)	---	150*	<u>Cadmium(T)</u>	<u>5.0</u>	---
		E. Coli (per 100 mL)	---	126	Chromium III	<u>TVS---</u>	TVS
		Inorganic (mg/L)			Chromium III(T)	<u>--50</u>	<u>400---</u>
			acute	chronic	Chromium VI	TVS	TVS
		Ammonia	TVS	TVS	Copper	---	64
		Boron	---	0.75	<u>Iron</u>	---	<u>WS</u>
		Chloride	---	<u>--250</u>	Iron(T)	---	5400
		Chlorine	0.019	0.011	Lead	TVS	TVS
		Cyanide	0.005	---	<u>Lead(T)</u>	<u>50</u>	---
		Nitrate	<u>10010</u>	---	Manganese	TVS	TVS/ <u>WS</u>
		Nitrite	<u>--0.05</u>	<u>0.05---</u>	Mercury(T)	---	0.01(†)
		Phosphorus	---	0.11*	Molybdenum(T)	---	150
		Sulfate	---	<u>--WS</u>	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	---	740		

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

D.O. = dissolved oxygen
 DM = daily maximum
 MWAT = maximum weekly average temperature
 See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Clear Creek Basin

14a. Mainstem of Clear Creek from the Farmers Highline Canal diversion in Golden, Colorado to the Denver Water conduit #16 crossing.						
COSPCL14A	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	Metals (ug/L)		
UP	Aq Life Warm <u>21</u>	Temperature °C	WS-II	WS-II	Aluminum	---
	Recreation N		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)	---	---	Cadmium	TVS
Temporary Modification(s):		E. Coli (per 100 mL)	---	630	Cadmium(T)	5.0
*Zinc(acute) = TVS x (times) the FWER (final water effect ratio).		Inorganic (mg/L)			Chromium III	---
Expiration date of 12/31/2024			acute	chronic	Chromium III(T)	50
Arsenic(chronic) = hybrid		Ammonia	TVS	TVS	Chromium VI	TVS
*Zinc(chronic) = TVS x (times) the FWER (final water effect ratio).		Boron	---	0.75	Copper	TVS
Expiration date of 12/31/2024		Chloride	---	250	Iron	---
*Uranium(acute) = See 38.5(3) for details.		Chlorine	0.019	0.011	Iron(T)	---
*Uranium(chronic) = See 38.5(3) for details.		Cyanide	0.005	---	Lead	TVS
		Nitrate	10	---	Lead(T)	50
		Nitrite	---0.5---	0.5---	Manganese	TVS
		Phosphorus	---	---	Mercury(I)	---
		Sulfate	---	WS	Molybdenum(T)	---
		Sulfide	---	0.002	Nickel	TVS
					Nickel(T)	---
					Selenium	TVS
					Silver	TVS
					Uranium	---varies*
					Zinc	TVSx1.57*TVS

14b. Mainstem of Clear Creek from the Denver Water conduit #16 crossing to a point just below Youngfield Street in Wheat Ridge, Colorado.						
COSPCL14B	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	Metals (ug/L)		
UP	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)	---
Qualifiers:		pH	6.5 - 9.0	---	Beryllium	---
Water + Fish Standards		chlorophyll a (mg/m ²)	---	---	Cadmium	TVS
Other:		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0
Temporary Modification(s):		Inorganic (mg/L)			Chromium III	---
Arsenic(chronic) = hybrid			acute	chronic	Chromium III(T)	50
Expiration Date of 12/31/2024		Ammonia	TVS	TVS	Chromium VI	TVS
*Zinc(acute) = TVS x (times) the FWER (final water effect ratio).		Boron	---	0.75	Copper	TVS
Expiration date of 12/31/2024		Chloride	---	250	Iron	---
*Uranium(acute) = See 38.5(3) for details.		Chlorine	0.019	0.011	Iron(T)	---
*Zinc(chronic) = TVS x (times) the FWER (final water effect ratio).		Cyanide	0.005	---	Lead	TVS
Expiration date of 12/31/2024		Nitrate	10	---	Lead(T)	50
See 38.5(3) for details.		Nitrite	---0.5---	0.5---	Manganese	TVS
		Phosphorus	---	---	Mercury(I)	---
		Sulfate	---	WS	Molybdenum(T)	---
		Sulfide	---	0.002	Nickel	TVS
					Nickel(T)	---
					Selenium	TVS
					Silver	TVS
					Uranium	---varies*
					Zinc	TVSx1.57*TVS

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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Clear Creek Basin

15. Mainstem of Clear Creek from Youngfield Street in Wheat Ridge, Colorado, to the confluence with the South Platte River.						
COSPCL15	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	Metals (ug/L)		
Reviewable	Aq Life Warm 1*	WS-II	WS-II	acute	chronic	
	Recreation E	acute	chronic	Aluminum	---	
	Water Supply	Temperature °C	---	Arsenic	340	
Qualifiers:		D.O. (mg/L)	---	Arsenic(T)	---	
Other:		pH	6.5 - 9.0	Beryllium	---	
Temporary Modification(s):		chlorophyll a (mg/m ²)	---	Cadmium	TVS	
Arsenic(chronic) = hybrid		E. Coli (per 100 mL)	---	Cadmium(T)	5.0	
Expiration Date of 12/31/2024		Inorganic (mg/L)		Chromium III	---	
		acute	chronic	Chromium III(T)	50	
		Ammonia	TVS	Chromium VI	TVS	
		Boron	---	Copper	TVS	
		Chloride	---	Iron	---	
		Chlorine	0.019	Iron(T)	---	
		Cyanide	0.005	Lead	TVS	
		Nitrate	10	Lead(T)	50	
		Nitrite	---0.5---	Manganese	TVS	
		Phosphorus	---	Mercury(T)	---	
		Sulfate	---	Molybdenum(T)	---	
		Sulfide	---	Nickel	TVS	
			0.002	Nickel(T)	---	
				Selenium	TVS	
				Silver	TVS	
				Uranium	---varies*	
				Zinc	TVSx1.57*TVS	
					TVSx1.57*TVS	

16a. Mainstem of Lena Gulch including all tributaries and wetlands from its source to the inlet of Maple Grove Reservoir.						
COSPCL16A	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Water Supply	DM	MWAT	Metals (ug/L)		
UP	Agriculture	WS-II	WS-II	acute	chronic	
	Aq Life Warm 2	acute	chronic	Aluminum	---	
	Recreation E	Temperature °C	---	Arsenic	340	
Qualifiers:		D.O. (mg/L)	---	Arsenic(T)	---	
Other:		pH	6.5 - 9.0	Beryllium	---	
*Uranium(acute) = See 38.5(3) for details.		chlorophyll a (mg/m ²)	---	Cadmium	TVS	
*Uranium(chronic) = See 38.5(3) for details.		E. Coli (per 100 mL)	---	Cadmium(T)	5.0	
		Inorganic (mg/L)		Chromium III	---	
		acute	chronic	Chromium III(T)	50	
		Ammonia	TVS	Chromium VI	TVS	
		Boron	---	Copper	TVS	
		Chloride	---	Iron	---	
		Chlorine	0.019	Iron(T)	---	
		Cyanide	0.005	Lead	TVS	
		Nitrate	10	Lead(T)	50	
		Nitrite	---0.05---	Manganese	TVS	
		Phosphorus	---	Mercury(T)	---	
		Sulfate	---	Molybdenum(T)	---	
		Sulfide	---	Nickel	TVS	
			0.002	Nickel(T)	---	
				Selenium	TVS	
				Silver	TVS	
				Uranium	---varies*	
				Zinc	TVS	
					TVS	

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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Clear Creek Basin

16b. All tributaries to Clear Creek from the Farmers Highline Canal diversion in Golden, Colorado to the confluence with the South Platte River, except for specific listings in Segments 16a, ~~17a~~, 17b, 18a and 18b.

COSPCL16B	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Recreation E	DM	MWAT	acute	chronic		
UP	Agriculture	Temperature °C	WS-II	WS-II	Aluminum	---	---
	Aq Life Warm 2		acute	chronic	Arsenic	340	---
Qualifiers:		D.O. (mg/L)	---	5.0	Arsenic(T)	---	100
Other:		pH	6.5 - 9.0	---	Beryllium	---	---
	<u>*Uranium(acute) = See 38.5(3) for details.</u>	chlorophyll a (mg/m ²)	---	150	Cadmium	TVS	TVS
	<u>*Uranium(chronic) = See 38.5(3) for details.</u>	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)	---	150
		Nitrite	<u>---0.5</u>	<u>0.5---</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

17a. Arvada Reservoir.

COSPCL17A	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute	chronic		
UPReviewable	Aq Life Cold 2	Temperature °C	CLL	CLL	Aluminum	---	---
	Recreation E		acute	chronic	Arsenic	340	---
	Water Supply	D.O. (mg/L)	---	6.0	Arsenic(T)	---	0.02
	DUWS	D.O. (spawning)	---	7.0	Beryllium	---	---
Qualifiers:		pH	6.5 - 9.0	---	Cadmium	TVS	TVS
Water + Fish Standards		chlorophyll a (ug/L)	---	8	Cadmium(T)	5.0	---
Other:		E. Coli (per 100 mL)	---	126	Chromium III	---	TVS
	<u>*Uranium(acute) = See 38.5(3) for details.</u>				Chromium III(T)	50	---
	<u>*Uranium(chronic) = See 38.5(3) for details.</u>	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	<u>---0.05</u>	<u>0.05---</u>	Molybdenum(T)	---	150
		Phosphorus	---	0.025	Nickel	TVS	TVS
		Sulfate	---	WS	Nickel(T)	---	100
		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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Clear Creek Basin

18b. Mainstem of Leyden Creek and Van Bibber Creek from their source to their confluence with Ralston Creek. Mainstem of Little Dry Creek from its source to its confluence with Clear Creek.

COSPCL18B	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	---
	Water Supply	D.O. (mg/L)	---	5.0	Arsenic(T)	---	0.02-40 ^A
Qualifiers:		pH	6.5 - 9.0	---	Beryllium	---	---
Water + Fish Standards		chlorophyll a (mg/m ²)	---	150	Cadmium	TVS	TVS
Other:		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0	---
<u>Temporary Modification(s):</u>		Inorganic (mg/L)			Chromium III	---	TVS
<u>Arsenic(chronic) = hybrid</u>		acute	chronic	Chromium III(T)	50	---	
<u>Expiration Date of 12/31/2024</u>		Ammonia	TVS	TVS	Chromium VI	TVS	TVS
<u>*Uranium(acute) = See 38.5(3) for details.</u>		Boron	---	0.75	Copper	TVS	TVS
<u>*Uranium(chronic) = See 38.5(3) for details.</u>		Chloride	---	250	Iron	---	WS
		Chlorine	0.019	0.011	Iron(T)	---	1000
		Cyanide	0.005	---	Lead	TVS	TVS
		Nitrate	10	---	Lead(T)	50	---
		Nitrite	0.5	0.5	Manganese	TVS	TVS/WS
		Phosphorus	---	0.17	Mercury(T)	---	0.01(t)
		Sulfate	---	WS	Molybdenum(T)	---	150
		Sulfide	---	0.002	Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	varies*	varies*
					Zinc	TVS	TVS

19. All tributaries to Clear Creek, including wetlands, within the Mt. Evans Wilderness Area.

COSPCL19	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	TVS
<u>*Uranium(acute) = See 38.5(3) for details.</u>		chlorophyll a (mg/m ²)	---	150	Cadmium(T)	5.0	---
<u>*Uranium(chronic) = See 38.5(3) for details.</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)	50	---
		Nitrate	10	---	Manganese	TVS	TVS/WS
		Nitrite	0.05	0.05	Mercury(T)	---	0.01(t)
		Phosphorus	---	0.11	Molybdenum(T)	---	150
		Sulfate	---	250	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Clear Creek Basin

24. Lakes and reservoirs in the Clear Creek system from the Farmers Highline Canal diversion in Golden, Colorado to the confluence with the South Platte River, except for **specific** listings in Segments 17a, 21 and 23.

COSPCL24	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute		chronic	
Reviewable	Aq Life Warm 1	Temperature °C	WL	WL	Aluminum	---	---
	Recreation UE		acute	chronic	Arsenic	340	---
	Water Supply	D.O. (mg/L)	---	5.0	Arsenic(T)	---	0.02
	DUWS*	pH	6.5 - 9.0	---	Beryllium	---	---
Qualifiers:		chlorophyll a (ug/L)	---	20*	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 12/31/2024		Ammonia	TVS	TVS	Chromium VI	TVS	TVS
*chlorophyll a (ug/L)(chronic) = applies only above the facilities listed at 38.5(4), applies only to lakes and reservoirs larger than 25 acres surface area.		Boron	---	0.75	Copper	TVS	TVS
*Classification: DUWS applies to Maple Grove Reservoir only.		Chloride	---	250	Iron	---	WS
*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4), applies only to lakes and reservoirs larger than 25 acres surface area.		Chlorine	0.019	0.011	Iron(T)	---	1000
<u>*Uranium(acute) = See 38.5(3) for details.</u>		Cyanide	0.005	---	Lead	TVS	TVS
<u>*Uranium(chronic) = See 38.5(3) for details.</u>		Nitrate	10	---	Lead(T)	50	---
		Nitrite	---0.5	0.5---	Manganese	TVS	TVS/WS
		Phosphorus	---	0.083*	Mercury(T)	---	0.01(†)
		Sulfate	---	WS	Molybdenum(T)	---	150
		Sulfide	---	0.002	Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	---varies*	---varies*
					Zinc	TVS	TVS

25. Guanella Reservoir (near Town of Empire, 39.758,-105.700)

COSPCL25	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	---
Qualifiers:		D.O. (mg/L)	---	6.0	Arsenic(T)	---	7.6
Other:		D.O. (spawning)	---	7.0	Beryllium	---	---
*chlorophyll a (ug/L)(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area.		pH	6.5 - 9.0	---	Cadmium	TVS	TVS
Phosphorus(chronic) = applies only to lakes and reservoirs larger than 25 acres surface area.		chlorophyll a (ug/L)	---	8	Chromium III	TVS	TVS
<u>*Uranium(acute) = See 38.5(3) for details.</u>		E. Coli (per 100 mL)	---	126	Chromium III(T)	---	100
<u>*Uranium(chronic) = See 38.5(3) for details.</u>					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	---	0.025*	Uranium	---varies*	---varies*
		Sulfate	---	---	Zinc	TVS	TVS
		Sulfide	---	0.002			

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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Big Dry Creek Basin

1. Mainstem of Big Dry Creek, including all tributaries and wetlands, from the ~~source~~outlet of Standley Lake to the confluence with the South Platte River, ~~except for specific listing in Segments 4a, 4b, 5, Walnut Creek, including tributaries and 6 wetlands, from the outlet of Great Western Reservoir to the confluence with Big Dry Creek.~~

COSPBD01	Classifications	Physical and Biological			Metals (ug/L)		
			DM	MWAT		acute	chronic
UP	Agriculture		WS-I	WS-I	Aluminum	---	---
	Aq Life Warm <u>21</u>	Temperature °C			Arsenic	340	---
	<u>Water Supply</u>		acute	chronic	Arsenic(T)	---	<u>1000.02</u>
	Recreation <u>EP</u>	D.O. (mg/L)	---	5.0	Beryllium	---	---
Qualifiers:		pH	6.5 - 9.0	---	Beryllium(T)	---	100
Other:		chlorophyll a (mg/m ²)	---	150*	Cadmium	TVS	TVS
<u>Temporary Modification(s):</u>		E. Coli (per 100 mL)	---	<u>205126</u>	<u>Cadmium(T)</u>	<u>5.0</u>	---
<u>Arsenic(chronic) = hybrid</u>		Inorganic (mg/L)			Chromium III	<u>TVS---</u>	TVS
<u>Expiration Date of 12/31/2024</u>			acute	chronic	Chromium III(T)	<u>---50</u>	<u>100---</u>
*chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 38.5(4).		Ammonia	TVS	TVS	Chromium VI	TVS	TVS
*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).		Boron	---	0.75	Copper	TVS	TVS
*Selenium(acute) = 19.1 ug/L from 11/1 - 3/31 TVS from 4/1 - 10/31.		Chloride	---	<u>---250</u>	Iron	---	<u>WS</u>
Refer to Section 38.6(4)(d).		Chlorine	0.019	0.011	Iron(T)	---	1000
*Selenium(chronic) = 15 ug/L from 11/1 - 3/31 7.4 ug/L from 4/1 - 10/31.		Cyanide	0.005	---	Lead	TVS	TVS
Refer to Section 38.6(4)(d).		Nitrate	<u>40010</u>	---	<u>Lead(T)</u>	<u>50</u>	---
<u>*Uranium(acute) = See 38.5(3) for details.</u>		Nitrite	---	4.5 -	Manganese	TVS	TVS/ <u>WS</u>
<u>*Uranium(chronic) = See 38.5(3) for details.</u>		Phosphorus	---	0.17*	Mercury(T)	---	0.01(†)
		Sulfate	---	<u>---WS</u>	Molybdenum(T)	---	150
		Sulfide	---	0.002	Nickel	TVS	TVS
					<u>Nickel(T)</u>	---	
					Selenium	---	varies*
					Selenium	varies*	---
					Silver	TVS	TVS
					Uranium	---	<u>---varies*</u>
					Zinc	TVS	TVS

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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Big Dry Creek Basin

2. Standley Lake.							
COSPBD02	Classifications	Physical and Biological			Metals (ug/L)		
Designation		DM	MWAT		acute	chronic	
Reviewable	Agriculture						
	Aq Life Warm 1	WL	WL	Aluminum	---	---	
	Recreation E	acute	chronic	Arsenic	340	---	
	Water Supply			Arsenic(T)	---	0.02	
	DUWS			pH	6.5 - 9.0	---	
Qualifiers:				chlorophyll a (ug/L)	---	4.0*	
Other:				E. Coli (per 100 mL)	---	126	
Temporary Modification(s):		Inorganic (mg/L)			Chromium III	---	TVS
Arsenic(chronic) = hybrid		acute	chronic	Chromium III(T)	50	---	
Expiration Date of 12/31/2024				Chromium VI	TVS	TVS	
*chlorophyll a (ug/L)(chronic) = The trophic status of Standley Lake shall be maintained as mesotrophic as measured by a combination of common indicator parameters such as total phosphorus, chlorophyll a, secchi depth, and dissolved oxygen. Refer to Section 38.6(4)(e).		Ammonia			TVS	TVS	
*Uranium(acute) = See 38.5(3) for details.		Boron	---	0.75	Copper	TVS	TVS
*Uranium(T)(chronic) = 3(t) Picocuries/Liter. See attached table 238.6(4) for additional standards for segment 2.		Chloride	---	250	Iron	---	WS
		Chlorine	0.019	0.011	Iron(T)	---	1000
		Cyanide	0.005	---	Lead	TVS	TVS
		Nitrate	10	---	Lead(T)	50	---
		Nitrite	--0.5	0.5---	Manganese	TVS	TVS/WS
		Phosphorus	---	---	Mercury(T)	---	0.01(†)
		Sulfate	---	WS	Molybdenum(T)	---	150
		Sulfide	---	0.002	Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	---	---
					varies*		
					Uranium(T)	---	3*
					Zinc	TVS	TVS

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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Big Dry Creek Basin

3. Great Western Reservoir.						
COSPBD03	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture Aq Life Warm 2 Recreation NE Water Supply	DM	MWAT		acute	chronic
UP			WL	WL	Temperature °C	Aluminum
		acute	chronic		Arsenic	340
		---	5.0	D.O. (mg/L)	Arsenic(T)	---
		6.5 - 9.0	---	pH	Beryllium	---
		---	---	chlorophyll a (ug/L)	Beryllium(T)	---
		---	630126	E. Coli (per 100 mL)	Cadmium	TVS
		Inorganic (mg/L)			Chromium III	TVS
		acute	chronic		Chromium III(T)	---
		TVS	TVS	Ammonia	Chromium VI	TVS
		---	0.75	Boron	Copper	TVS
		---	---	Chloride	Iron(T)	---
		0.019	0.011	Chlorine	Lead	TVS
		0.005	---	Cyanide	Manganese	TVS
		100	---	Nitrate	Mercury(T)	---
		---	2.7	Nitrite	Molybdenum(T)	---
		---	---	Phosphorus	Nickel	TVS
		---	---	Sulfate	Selenium	TVS
		---	0.002	Sulfide	Silver	TVS
					Uranium	---
					Uranium(T)	4*
					Zinc	TVS

4a. Mainstem and all tributaries to Woman and Walnut Creeks from sources to Standley Lake and Great Western Reservoir, respectively, except for specific listings in Segments 4b and 55a.

4a. Mainstem and all tributaries to Woman and Walnut Creeks from sources to Standley Lake and Great Western Reservoir, <u>respectively</u> , except for <u>specific</u> listings in Segments 4b and <u>55a</u> .						
COSPBD04A	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture Aq Life Warm 2 Recreation E Water Supply	DM	MWAT		acute	chronic
UP			WS-I	WS-I	Temperature °C	Aluminum
		acute	chronic		Arsenic	340
		---	5.0	D.O. (mg/L)	Arsenic(T)	---
		6.5 - 9.0	---	pH	Beryllium(T)	4.0
		---	150	chlorophyll a (mg/m ²)	Cadmium	TVS
		---	126	E. Coli (per 100 mL)	Cadmium(T)	5.0
		Inorganic (mg/L)			Chromium III	---
		acute	chronic		Chromium III(T)	50
		TVS	TVS	Ammonia	Chromium VI	TVS
		---	0.75	Boron	Copper	TVS
		---	---	Chloride	Iron(T)	---
		0.019	0.011	Chlorine	Lead	TVS
		0.005	---	Cyanide	Lead(T)	50
		10	---	Nitrate	Manganese	TVS
		---	0.17	Nitrite	Mercury(T)	---
		---	---	Phosphorus	Molybdenum(T)	---
		---	---	Sulfate	Nickel	TVS
		---	0.002	Sulfide	Nickel(T)	---
					Selenium	TVS
					Silver	TVS
					Uranium	---
					Uranium(T)	16.8*
					Zinc	TVS

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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Big Dry Creek Basin

4b.4b. North Walnut Creek from its source to the western edge of the Central Operable Unit. North and South Walnut Creek and Walnut Creek, from the eastern edge of the Central Operable Unit on Rocky Flats Property to Indiana Street and North Walnut Creek from its source to the western edge of the Central Operable Unit.							
COSPBD04B	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture Aq Life Warm 2 Recreation PE Water Supply		DM	MWAT		acute	chronic
UP		Temperature °C	WS-II	WS-II	Aluminum	---	---
			acute	chronic	Arsenic	340	---
		D.O. (mg/L)	---	5.0	Arsenic(T)	---	0.02-10 ^A
Qualifiers:		pH	6.5 - 9.0	---	Beryllium(T)	---	4.0
Other:		chlorophyll a (mg/m ²)	---	150	Cadmium	TVS	TVS
		E. Coli (per 100 mL)	---	205126	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	---	---	Iron(T)	---	1000
		Chlorine	0.019	0.011	Lead	TVS	TVS
		Cyanide	0.005	---	Lead(T)	50	---
		Nitrate	10	---	Manganese	TVS	TVS
		Nitrite	---0.5	0.5---	Mercury(T)	---	0.01(†)
		Phosphorus	---	0.17	Molybdenum(T)	---	150
		Sulfate	---	---	Nickel	TVS	TVS
		Sulfide	---	0.002	Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	--- varies*	---
					Uranium(T)	---	16.8*
					Zinc	TVS	TVS

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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Big Dry Creek Basin

5b. All lakes and reservoirs from the western edge of the Central Operable Unit to the eastern boundary of the Central Operable Unit and Pond C-2 on Woman Creek.							
COSPBD05B	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT		acute	chronic	
UP	Aq Life Warm 2	Temperature °C	WL	WL	Arsenic	340	---
	Recreation N		acute	chronic	Arsenic(T)	---	0.02-10 ^A
	Water Supply	D.O. (mg/L)	---	5.0	Beryllium(T)	---	4.0
Qualifiers:		pH	6.5 - 9.0	---	Cadmium	TVS	TVS
Other:		chlorophyll a (mg/m ²)	---	---	Cadmium(T)	5.0	---
*Uranium(acute) = See 38.5(3) for details.		E. Coli (per 100 mL)	---	630	Chromium III	---	TVS
*Uranium(T)(chronic) = See 38.6(4) for additional standards for segment 5b.		Inorganic (mg/L)			Chromium III(T)	50	---
			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	Lead(T)	50	---
		Cyanide	0.005	---	Manganese	TVS	TVS
		Nitrate	10	---	Mercury(T)	---	0.01
		Nitrite	0.5	---	Molybdenum(T)	---	150
		Phosphorus	---	0.17	Nickel	TVS	TVS
		Sulfate	---	---	Nickel(T)	---	100
		Sulfide	---	0.002	Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	varies*	---
					Uranium(T)	---	16.8*
					Zinc	TVS	TVS
6. Upper Big Dry Creek and South Upper Big Dry Creek, from their source to Standley Lake.							
COSPBD06	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT		acute	chronic	
UP	Aq Life Warm 2	Temperature °C	WS-I	WS-I	Aluminum	---	---
	Recreation NE		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 38.5(3) for details.		E. Coli (per 100 mL)	---	630 126	Cadmium(T)	5.0	---
*Uranium(chronic) = See 38.5(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	--- 0.5	0.5	Manganese	TVS	TVS/WS
		Phosphorus	---	0.17	Mercury(T)	---	0.01(†)
		Sulfate	---	WS	Molybdenum(T)	---	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

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

1. All tributaries to Boulder Creek, including all wetlands, within the Indian Peaks and James Peak Wilderness Areas.						
COSPBO01	Classifications	Physical and Biological			Metals (ug/L)	
Designation		DM	MWAT		acute	chronic
OW	Agriculture					
	Aq Life Cold 1	CS-I	CS-I	Temperature °C	---	---
	Recreation E	acute	chronic	Arsenic	340	---
	Water Supply			D.O. (mg/L)	---	0.02
Qualifiers:				D.O. (spawning)	---	7.0
Other:				pH	6.5 - 9.0	---
Temporary Modification(s):				chlorophyll a (mg/m ²)	---	150
Arsenic(chronic) = hybrid				E. Coli (per 100 mL)	---	126
Expiration Date of 12/31/2024						
*Uranium(acute) = See 38.5(3) for details.						
*Uranium(chronic) = See 38.5(3) for details.						
		Inorganic (mg/L)				
		acute	chronic	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)	---	150
				Nickel	TVS	TVS
				Nickel(T)	---	100
				Selenium	TVS	TVS
				Silver	TVS	TVS(tr)
				Uranium	<u>varies*</u>	<u>varies*</u>
				Zinc	TVS	TVS

2a. Mainstem of Boulder Creek, including all tributaries and wetlands, from the boundary of the Indian Peaks Wilderness Area to a point immediately below the confluence with North Boulder Creek, except for the specific listings in Segment 3.						
COSPBO02A	Classifications	Physical and Biological			Metals (ug/L)	
Designation		DM	MWAT		acute	chronic
Reviewable	Agriculture					
	Aq Life Cold 1	CS-I	CS-I	Temperature °C	---	---
	Recreation E	acute	chronic	Arsenic	340	---
	Water Supply			D.O. (mg/L)	---	0.02
Qualifiers:				D.O. (spawning)	---	7.0
Other:				pH	6.5 - 9.0	---
Temporary Modification(s):				chlorophyll a (mg/m ²)	---	150*
Arsenic(chronic) = hybrid				E. Coli (per 100 mL)	---	126
Expiration Date of 12/31/2024						
*chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 38.5(4).						
*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).						
*Uranium(acute) = See 38.5(3) for details.						
*Uranium(chronic) = See 38.5(3) for details.						
		Inorganic (mg/L)				
		acute	chronic	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)	---	150
				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

D.O. = dissolved oxygen

DM = daily maximum

MWAT = maximum weekly average temperature

See 38.6 for further details on applied standards.

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

2b. Mainstem of Boulder Creek, including all tributaries and wetlands, from a point immediately below the confluence with North Boulder Creek to a point immediately above the confluence with South Boulder Creek.						
COSPBO02B	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture Aq Life Cold 1 Recreation E Water Supply	DM	MWAT			
Reviewable		acute	chronic	acute	chronic	
		Temperature °C	CS-II	CS-II	Aluminum	---
		D.O. (mg/L)	---	6.0	Arsenic	340
Qualifiers:		D.O. (spawning)	---	7.0	Arsenic(T)	---
Other:		pH	6.5 - 9.0	---	Beryllium	---
Temporary Modification(s):		chlorophyll a (mg/m ²)	---	150*	Cadmium	TVS
Arsenic(chronic) = hybrid		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0
Expiration Date of 12/31/2024		Inorganic (mg/L)			Chromium III	---
					Chromium III(T)	50
					Chromium VI	TVS
					Chromium VI(T)	TVS
					Copper	TVS
					Iron	---
					Iron(T)	---
					Lead	TVS
					Lead(T)	50
					Manganese	TVS
					Manganese(T)	TVS/WS
					Mercury(T)	---
					Mercury(T)	0.01(†)
					Molybdenum(T)	---
					Molybdenum(T)	150
					Nickel	TVS
					Nickel(T)	---
					Nickel(T)	100
					Selenium	TVS
					Selenium	TVS
					Silver	TVS
					Silver	TVS(tr)
					Uranium	varies*
					Uranium	varies*
					Zinc	TVS
					Zinc	TVS

3. Mainstem of Middle Boulder Creek, including all tributaries and wetlands, from the source to the outlet of Barker Reservoir, except for specific listings in Segment 1.						
COSPBO03	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture Aq Life Cold 1 Recreation E Water Supply	DM	MWAT			
Reviewable		acute	chronic	acute	chronic	
		Temperature °C	CS-I	CS-I	Aluminum	---
		D.O. (mg/L)	---	6.0	Arsenic	340
Qualifiers:		D.O. (spawning)	---	7.0	Arsenic(T)	---
Other:		pH	6.5 - 9.0	---	Beryllium	---
Temporary Modification(s):		chlorophyll a (mg/m ²)	---	150*	Cadmium	TVS
Arsenic(chronic) = hybrid		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0
Expiration Date of 12/31/2024		Inorganic (mg/L)			Chromium III	---
					Chromium III(T)	50
					Chromium VI	TVS
					Chromium VI(T)	TVS
					Copper	TVS
					Iron	---
					Iron(T)	---
					Lead	TVS
					Lead(T)	50
					Manganese	TVS
					Manganese(T)	TVS/WS
					Mercury(T)	---
					Mercury(T)	0.01(†)
					Molybdenum(T)	---
					Molybdenum(T)	150
					Nickel	TVS
					Nickel(T)	---
					Nickel(T)	100
					Selenium	TVS
					Selenium	TVS
					Silver	TVS
					Silver	TVS(tr)
					Uranium	varies*
					Uranium	varies*
					Zinc	TVS
					Zinc	TVS

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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

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

4a. Mainstem of South Boulder Creek, including all tributaries and wetlands, from the source to the outlet of Gross Reservoir except for specific listings in Segment 1.										
COSPBO04A	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	---	---	
Qualifiers:		D.O. (mg/L)	---	6.0	Arsenic	340	---	---		
Other:		D.O. (spawning)	---	7.0	Arsenic(T)	---	0.02	Beryllium	---	---
Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2024 *Uranium(acute) = See 38.5(3) for details. *Uranium(chronic) = See 38.5(3) for details.		pH	6.5 - 9.0	---	Cadmium	TVS	TVS	Cadmium(T)	5.0	---
		chlorophyll a (mg/m ²)	---	150	Chromium III	---	TVS	Chromium III(T)	50	---
		E. Coli (per 100 mL)	---	126	Chromium III(T)	50	---	Chromium VI	TVS	TVS
		Inorganic (mg/L)			Chromium VI	TVS	TVS	Copper	TVS	TVS
		acute	chronic	Ammonia	TVS	TVS	Iron	---	WS	
		---	0.75	Boron	---	0.75	Iron(T)	---	1000	
		---	250	Chloride	---	250	Lead	TVS	TVS	
		0.019	0.011	Chlorine	0.019	0.011	Lead(T)	50	---	
		0.005	---	Cyanide	0.005	---	Manganese	TVS	TVS/WS	
		10	---	Nitrate	10	---	Mercury(T)	---	0.01(†)	
		---	0.11	Nitrite	---	0.11	Molybdenum(T)	---	150	
		---	WS	Phosphorus	---	WS	Nickel	TVS	TVS	
		---	0.002	Sulfate	---	WS	Nickel(T)	---	100	
		---	0.002	Sulfide	---	0.002	Selenium	TVS	TVS	
		---	0.002	Sulfide	---	0.002	Silver	TVS	TVS(tr)	
		---	0.002	Sulfide	---	0.002	Uranium	varies*	varies*	
		---	0.002	Sulfide	---	0.002	Zinc	TVS	TVS	

4b. Mainstem of South Boulder Creek, including all tributaries and wetlands, from the outlet of Gross Reservoir to South Boulder Road, except for specific listings in Segments 4c and 4d.										
COSPBO04B	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-II	CS-II	Aluminum	---	---	
Qualifiers:		D.O. (mg/L)	---	6.0	Arsenic	340	---	---		
Other:		D.O. (spawning)	---	7.0	Arsenic(T)	---	0.02	Beryllium	---	---
Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2024 *chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 38.5(4). *Phosphorus(chronic) = applies only above the facilities listed at 38.5(4). *Uranium(acute) = See 38.5(3) for details. *Uranium(chronic) = See 38.5(3) for details.		pH	6.5 - 9.0	---	Cadmium	TVS	TVS	Cadmium(T)	5.0	---
		chlorophyll a (mg/m ²)	---	150*	Chromium III	---	TVS	Chromium III(T)	50	---
		E. Coli (per 100 mL)	---	126	Chromium III(T)	50	---	Chromium VI	TVS	TVS
		Inorganic (mg/L)			Chromium VI	TVS	TVS	Copper	TVS	TVS
		acute	chronic	Ammonia	TVS	TVS	Iron	---	WS	
		---	0.75	Boron	---	0.75	Iron(T)	---	1000	
		---	250	Chloride	---	250	Lead	TVS	TVS	
		0.019	0.011	Chlorine	0.019	0.011	Lead(T)	50	---	
		0.005	---	Cyanide	0.005	---	Manganese	TVS	TVS/WS	
		10	---	Nitrate	10	---	Mercury(T)	---	0.01(†)	
		---	0.11*	Nitrite	---	0.11*	Molybdenum(T)	---	150	
		---	WS	Phosphorus	---	WS	Nickel	TVS	TVS	
		---	0.002	Sulfate	---	WS	Nickel(T)	---	100	
		---	0.002	Sulfide	---	0.002	Selenium	TVS	TVS	
		---	0.002	Sulfide	---	0.002	Silver	TVS	TVS(tr)	
		---	0.002	Sulfide	---	0.002	Uranium	varies*	varies*	
		---	0.002	Sulfide	---	0.002	Zinc	TVS	TVS	

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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

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

4c. Mainstem of Cowdrey Drainage from the source below Cowdrey Reservoir #2 to the Davidson Ditch.							
COSPBO04C	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture Aq Life Warm 2 Recreation E Water Supply	DM	MWAT		acute	chronic	
UP		Temperature °C	WS-II	WS-II	Aluminum	---	---
			acute	chronic	Arsenic	340	---
	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	
<u>*Uranium(acute) = See 38.5(3) for details.</u>	E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0	---	
<u>*Uranium(chronic) = See 38.5(3) for details.</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	---	Lead(T)	50	---	
	Nitrite	0.5	0.5	Manganese	TVS	TVS/WS	
	Phosphorus	---	0.17	Mercury(T)	---	0.01(†)	
	Sulfate	---	WS	Molybdenum(T)	---	150	
	Sulfide	---	0.002	Nickel	TVS	TVS	
				Nickel(T)	---	100	
				Selenium	TVS	TVS	
				Silver	TVS	TVS	
				Uranium	<u>varies*</u>	<u>varies*</u>	
				Zinc	TVS	TVS	

4d. Mainstem of Cowdrey Drainage from immediately downstream of the Davidson Ditch to the confluence with South Boulder Creek.							
COSPBO04D	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture Aq Life Warm 2 Recreation E Water Supply	DM	MWAT		acute	chronic	
UP		Temperature °C	WS-II	WS-II	Aluminum	---	---
			acute	chronic	Arsenic	340	---
	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	
<u>*Uranium(acute) = See 38.5(3) for details.</u>	E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0	---	
<u>*Uranium(chronic) = See 38.5(3) for details.</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	---	Lead(T)	50	---	
	Nitrite	0.5	0.5	Manganese	TVS	TVS/WS	
	Phosphorus	---	0.17	Mercury(T)	---	0.01(†)	
	Sulfate	---	WS	Molybdenum(T)	---	150	
	Sulfide	---	0.002	Nickel	TVS	TVS	
				Nickel(T)	---	100	
				Selenium	TVS	TVS	
				Silver	TVS	TVS	
				Uranium	<u>varies*</u>	<u>varies*</u>	
				Zinc	TVS	TVS	

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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

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

5. Mainstem of South Boulder Creek from South Boulder Road to the confluence with Boulder Creek.							
COSPBO05	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:		pH	6.5 - 9.0	---	Beryllium	---	---
Other:		chlorophyll a (mg/m ²)	---	---	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 12/31/2024			acute	chronic	Chromium III(T)	50	---
<u>*Uranium(acute) = See 38.5(3) for details.</u>		Ammonia	TVS	TVS	Chromium VI	TVS	TVS
<u>*Uranium(chronic) = See 38.5(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	0.5	0.5	Manganese	TVS	TVS/WS
		Phosphorus	---	---	Mercury(T)	---	0.01(†)
		Sulfate	---	WS	Molybdenum(T)	---	150
		Sulfide	---	0.002	Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	<u>varies*</u>	<u>varies*</u>
					Zinc	TVS	TVS

6. Mainstem of Coal Creek, including all tributaries and wetlands, from the source to Highway 93.							
COSPBO06	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	TVS
<u>*Uranium(acute) = See 38.5(3) for details.</u>		chlorophyll a (mg/m ²)	---	150	Cadmium(T)	5.0	---
<u>*Uranium(chronic) = See 38.5(3) for details.</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)	50	---
		Nitrate	10	---	Manganese	TVS	TVS/WS
		Nitrite	0.05	0.05	Mercury(T)	---	0.01(†)
		Phosphorus	---	0.11	Molybdenum(T)	---	150
		Sulfate	---	WS	Nickel	TVS	TVS
		Sulfide	---	0.002	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

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

7a. Mainstem of Coal Creek from Highway 93 to Highway 36 (Boulder Turnpike).							
COSPBO07A	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:		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 12/31/2024			acute	chronic	Chromium III(T)	50	---
*Uranium(acute) = See 38.5(3) for details.		Ammonia	TVS	TVS	Chromium VI	TVS	TVS
*Uranium(chronic) = See 38.5(3) for details.		Boron	---	0.75	Copper	TVS	TVS
		Chloride	---	250	Iron	---	WS
		Chlorine	0.019	0.011	Iron(T)	---	1000
		Cyanide	0.005	---	Lead	TVS	TVS
		Nitrate	10	---	Lead(T)	50	---
		Nitrite	---0.5	0.5---	Manganese	TVS	TVS/WS
		Phosphorus	---	0.17	Mercury(T)	---	0.01(†)
		Sulfate	---	WS	Molybdenum(T)	---	150
		Sulfide	---	0.002	Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	varies*	varies*
					Zinc	TVS	TVS

7b. Mainstem of Coal Creek from Highway 36 to the confluence with Boulder Creek.							
COSPBO07B	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT		acute	chronic	
Reviewable	Aq Life Warm <u>21</u>	Temperature °C	WS-III	WS-III	Aluminum	---	---
	Recreation E		acute	chronic	Arsenic	340	---
	Water Supply	D.O. (mg/L)	---	5.0	Arsenic(T)	---	0.02-40 ^A
Qualifiers:		pH	6.5 - 9.0	---	Beryllium	---	---
Other:		chlorophyll a (mg/m ²)	---	---	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 12/31/2024			acute	chronic	Chromium III(T)	50	---
*Uranium(acute) = See 38.5(3) for details.		Ammonia	TVS	TVS	Chromium VI	TVS	TVS
*Uranium(chronic) = See 38.5(3) for details.		Boron	---	0.75	Copper	TVS	TVS
		Chloride	---	250	Iron	---	WS
		Chlorine	0.019	0.011	Iron(T)	---	1000
		Cyanide	0.005	---	Lead	TVS	TVS
		Nitrate	10	---	Lead(T)	50	---
		Nitrite	---0.5	0.5---	Manganese	TVS	TVS/WS
		Phosphorus	---	---	Mercury(T)	---	0.01(†)
		Sulfate	---	WS	Molybdenum(T)	---	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

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

8. All tributaries to South Boulder Creek, including all wetlands from South Boulder Road to the confluence with Boulder Creek and all tributaries to Coal Creek, including all wetlands from Highway 93 to the confluence with Boulder Creek.

COSPBO08	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture		DM	MWAT		acute	chronic
UP	Aq Life Warm <u>21</u>	Temperature °C	WS-II	WS-II	Aluminum	---	---
	Water Supply		acute	chronic	Arsenic	340	---
	Recreation E	D.O. (mg/L)	---	5.0	Arsenic(T)	---	<u>1000.02</u>
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)	<u>5.0</u>	---
Arsenic(chronic) = hybrid		Inorganic (mg/L)			Chromium III	<u>TVS---</u>	TVS
Expiration Date of 12/31/2024			acute	chronic	Chromium III(T)	<u>---50</u>	<u>100---</u>
*chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 38.5(4).		Ammonia	TVS	TVS	Chromium VI	TVS	TVS
*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).		Boron	---	0.75	Copper	TVS	TVS
*Uranium(acute) = See 38.5(3) for details.		Chloride	---	<u>---250</u>	Iron	---	<u>---WS</u>
*Uranium(chronic) = See 38.5(3) for details.		Chlorine	0.019	0.011	Iron(T)	---	1000
		Cyanide	0.005	---	Lead	TVS	TVS
		Nitrate	<u>10010</u>	---	Lead(T)	<u>50</u>	---
		Nitrite	<u>---0.5</u>	<u>0.5---</u>	Manganese	TVS	TVS/ <u>WS</u>
		Phosphorus	---	0.17*	Mercury(T)	---	0.01(†)
		Sulfate	---	<u>---WS</u>	Molybdenum(T)	---	150
		Sulfide	---	0.002	Nickel	TVS	TVS
					Nickel(T)	---	<u>100</u>
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	<u>varies*</u>	<u>varies*</u>
					Zinc	TVS	TVS

9. Mainstem of Boulder Creek from a point immediately above the confluence with South Boulder Creek to the confluence with Coal Creek.

COSPBO09	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture		DM	MWAT		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:		pH	6.5 - 9.0	---	Beryllium	---	---
Other:		chlorophyll a (mg/m ²)	---	---	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 12/31/2024			acute	chronic	Chromium III(T)	50	---
*Uranium(acute) = See 38.5(3) for details.		Ammonia	TVS	TVS	Chromium VI	TVS	TVS
*Uranium(chronic) = See 38.5(3) for details.		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>---0.5</u>	<u>0.5---</u>	Manganese	TVS	TVS/WS
		Phosphorus	---	---	Mercury(T)	---	0.01(†)
		Sulfate	---	WS	Molybdenum(T)	---	150
		Sulfide	---	0.002	Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	<u>varies*</u>	<u>varies*</u>
					Zinc	TVS	TVS

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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

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

10. Mainstem of Boulder Creek from the confluence with Coal Creek to the confluence with St. Vrain Creek.							
COSPBO10	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	Arsenic	340	---
		D.O. (mg/L)	---	5.0	Arsenic(T)	---	0.02
Qualifiers:		pH	6.5 - 9.0	---	Beryllium	---	---
Other:		chlorophyll a (mg/m ²)	---	---	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 12/31/2024			acute	chronic	Chromium III(T)	50	---
*Uranium(acute) = See 38.5(3) for details.		Ammonia	TVS	TVS	Chromium VI	TVS	TVS
*Uranium(chronic) = See 38.5(3) for details.		Boron	---	0.75	Copper	TVS	TVS
		Chloride	---	250	Iron	---	WS
		Chlorine	0.019	0.011	Iron(T)	---	1000
		Cyanide	0.005	---	Lead	TVS	TVS
		Nitrate	10	---	Lead(T)	50	---
		Nitrite	--0.5-	0.5---	Manganese	TVS	TVS/WS
		Phosphorus	---	---	Mercury(T)	---	0.01(†)
		Sulfate	---	WS	Molybdenum(T)	---	150
		Sulfide	---	0.002	Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	varies*	varies*
					Zinc	TVS	TVS

11. All tributaries to Boulder Creek, including all wetlands from a point immediately above the confluence with South Boulder Creek to the confluence with St. Vrain Creek, except for specific listings in Segments 5, 7a and 7b.							
COSPBO11	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture		DM	MWAT		acute	chronic
UPReviewable	Aq Life Warm 21 Recreation E Water Supply	Temperature °C	WS-II	WS-II	Aluminum	---	---
			acute	chronic	Arsenic	340	---
		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)	---	---	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 12/31/2024			acute	chronic	Chromium III(T)	50	---
*Uranium(acute) = See 38.5(3) for details.		Ammonia	TVS	TVS	Chromium VI	TVS	TVS
*Uranium(chronic) = See 38.5(3) for details.		Boron	---	0.75	Copper	TVS	TVS
		Chloride	---	250	Iron	---	WS
		Chlorine	0.019	0.011	Iron(T)	---	1000
		Cyanide	0.005	---	Lead	TVS	TVS
		Nitrate	10	---	Lead(T)	50	---
		Nitrite	--0.5-	0.5---	Manganese	TVS	TVS/WS
		Phosphorus	---	---	Mercury(T)	---	0.01(†)
		Sulfate	---	WS	Molybdenum(T)	---	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

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

12. Deleted.						
COSPBO12	Classifications	Physical and Biological			Metals (ug/L)	
Designation		DM	MWAT	acute chronic		
Reviewable						
Qualifiers:		acute	chronic			
Other:						
		Inorganic (mg/L)				
		acute	chronic			
13. All lakes and reservoirs tributary to Boulder Creek that are within the boundary of the Indian Peaks and James Peak Wilderness Areas.						
COSPBO13	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	acute chronic		
OW	Aq Life Cold 1	CL	CL	Aluminum	---	
	Recreation E	acute	chronic	Arsenic	340	
	Water Supply	---	6.0	Arsenic(T)	---	
Qualifiers:		---	7.0	Beryllium	---	
Other:		6.5 - 9.0	---	Cadmium	TVS	
		---	8*	Cadmium(T)	5.0	
		---	126	Chromium III	---	
		Inorganic (mg/L)		Chromium III(T)	50	
		acute	chronic	Chromium VI	TVS	
		TVS	TVS	Copper	TVS	
		---	0.75	Iron	---	
		---	250	Iron(T)	---	
		0.019	0.011	Lead	TVS	
		0.005	---	Lead(T)	50	
		10	---	Manganese	TVS	
		---	0.025*	Mercury(T)	---	
		---	WS	Molybdenum(T)	---	
		---	0.002	Nickel	TVS	
				Nickel(T)	---	
				Selenium	TVS	
				Silver	TVS	
				Uranium	varies*	
				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 38.5(3) for details.
*Uranium(chronic) = See 38.5(3) for details.

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

D.O. = dissolved oxygen
 DM = daily maximum
 MWAT = maximum weekly average temperature
 See 38.6 for further details on applied standards.

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

14. All lakes and reservoirs tributary to Boulder Creek from the source to a point immediately above the South Boulder Creek confluence, except as specified in Segment 13. This segment includes Barker and Lakewood Reservoir.

COSPBO14	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute		chronic	
Reviewable	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)	---	
	DUWS*	D.O. (spawning)	---	7.0	Beryllium	---	
Qualifiers:		pH	6.5 - 9.0	---	Cadmium	TVS 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					Chromium III(T)	50 ---	
Expiration Date of 12/31/2024					Chromium VI	TVS TVS	
*chlorophyll a (ug/L)(chronic) = applies only above the facilities listed at 38.5(4), applies only to lakes and reservoirs larger than 25 acres surface area.					Copper	TVS TVS	
*Classification: DUWS applies to Lakewood Reservoir only.					Iron	---	
*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4), applies only to lakes and reservoirs larger than 25 acres surface area.					Iron(T)	---	
*Uranium(acute) = See 38.5(3) for details.					Lead	TVS TVS	
*Uranium(chronic) = See 38.5(3) for details.					Lead(T)	50 ---	
*Temperature =					Manganese	TVS TVS/WS	
DM and MWAT=CL,CLL from 1/1-3/31					Mercury(T)	---	
Barker Reservoir					Molybdenum(T)	---	
DM=CL and MWAT=16.6 from 4/1-12/31					Nickel	TVS TVS	
All others					Nickel(T)	---	
DM and MWAT=CL,CLL from 4/1-12/31					Selenium	TVS TVS	
					Silver	TVS TVS(tr)	
					Uranium	varies* varies*	
					Zinc	TVS TVS	

15. All lakes and reservoirs tributary to South Boulder Creek from the source to Highway 93. All lakes and reservoirs tributary to Coal Creek from the source to Highway 93 except for specific listings in segments 13 and 18.

COSPBO15	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute		chronic	
Reviewable	Aq Life Cold 2	Temperature °C	CL CL	Aluminum	---	---	
	Recreation E		acute chronic	Arsenic	340	---	
	Water Supply	D.O. (mg/L)	---	6.0	Arsenic(T)	---	
	DUWS*	D.O. (spawning)	---	7.0	Beryllium	---	
Qualifiers:		pH	6.5 - 9.0	---	Cadmium	TVS TVS	
Other:		chlorophyll a (ug/L)	---	8*	Cadmium(T)	5.0 ---	
*chlorophyll a (ug/L)(chronic) = applies only above the facilities listed at 38.5(4), applies only to lakes and reservoirs larger than 25 acres surface area.		E. Coli (per 100 mL)	---	126	Chromium III	---	
*Classification: DUWS applies to Kossler Lake only.					Chromium III(T)	50 ---	
*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4), applies only to lakes and reservoirs larger than 25 acres surface area.					Chromium VI	TVS TVS	
*Uranium(acute) = See 38.5(3) for details.					Copper	TVS TVS	
*Uranium(chronic) = See 38.5(3) for details.					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	varies* varies*	
					Zinc	TVS TVS	

All metals are dissolved unless otherwise noted.

T = total recoverable

t = total

tr = trout

D.O. = dissolved oxygen

DM = daily maximum

MWAT = maximum weekly average temperature

See 38.6 for further details on applied standards.

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

16. All lakes and reservoirs tributary to South Boulder Creek system from Highway 93 to the confluence with Boulder Creek. All lakes and reservoirs tributary to Coal Creek system from Highway 93 to the confluence with Boulder Creek.

COSPBO16	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute	chronic		
Reviewable	Aq Life Warm 2	WL	WL	Aluminum	---	---	
	Recreation E	acute	chronic	Arsenic	340	---	
	Water Supply	---	5.0	Arsenic(T)	---	0.02-10 ^A	
Qualifiers:		pH	6.5 - 9.0	---	Beryllium	---	---
Other:		chlorophyll a (ug/L)	---	---	Cadmium	TVS	TVS
*Uranium(acute) = See 38.5(3) for details.		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0	---
*Uranium(chronic) = See 38.5(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	---0.5	0.5---	Manganese	TVS	TVS/WS
		Phosphorus	---	---	Mercury(T)	---	0.01(†)
		Sulfate	---	WS	Molybdenum(T)	---	150
		Sulfide	---	0.002	Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	varies*	varies*
					Zinc	TVS	TVS

17. All lakes and reservoirs tributary to Boulder Creek from a point immediately below the confluence with South Boulder Creek to the confluence with St. Vrain Creek, except as specified in Segments 15 and 16.

COSPBO17	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute	chronic		
Reviewable	Aq Life Warm 2	WL	WL	Aluminum	---	---	
	Recreation E	acute	chronic	Arsenic	340	---	
	Water Supply	---	5.0	Arsenic(T)	---	0.02	
	DUWS*	pH	6.5 - 9.0	---	Beryllium	---	---
Qualifiers:		chlorophyll a (ug/L)	---	---	Cadmium	TVS	TVS
Water + Fish Standards		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0	---
Other:		Inorganic (mg/L)		Chromium III	---	TVS	
Temporary Modification(s):		acute	chronic	Chromium III(T)	50	---	
Arsenic(chronic) = hybrid		Ammonia	TVS	TVS	Chromium VI	TVS	TVS
Expiration Date of 12/31/2024		Boron	---	0.75	Copper	TVS	TVS
*Classification: DUWS applies to Goosehaven Reservoir , Erie Lake , Twomile Canyon Reservoir , Baseline Reservoir , Marshall Reservoir , Thomas Reservoir and Waneka Reservoirs only.		Chloride	---	250	Iron	---	WS
*Uranium(acute) = See 38.5(3) for details.		Chlorine	0.019	0.011	Iron(T)	---	1000
*Uranium(chronic) = See 38.5(3) for details.		Cyanide	0.005	---	Lead	TVS	TVS
		Nitrate	10	---	Lead(T)	50	---
		Nitrite	---0.5	0.5---	Manganese	TVS	TVS/WS
		Phosphorus	---	---	Mercury(T)	---	0.01(†)
		Sulfate	---	WS	Molybdenum(T)	---	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS St. Vrain Creek Basin

1. All tributaries to St. Vrain Creek, including all wetlands, which are within the Indian Peaks Wilderness Area and Rocky Mountain National Park.					
COSPSV01	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)	---
Qualifiers:		---	7.0	Beryllium	---
Other:		6.5 - 9.0	---	Cadmium	TVS
Temporary Modification(s):		---	150	Cadmium(T)	---
Arsenic(chronic) = hybrid		---	126	Chromium III	---
Expiration Date of 12/31/2024				Chromium III(T)	---
*Uranium(acute) = See 38.5(3) for details.		Inorganic (mg/L)		Chromium VI	TVS
*Uranium(chronic) = See 38.5(3) for details.		acute	chronic	Copper	TVS
		TVS	TVS	Iron	---
		---	0.75	Iron(T)	---
		---	250	Lead	TVS
		0.019	0.011	Lead(T)	---
		0.005	---	Manganese	TVS
		10	---	Mercury(T)	---
		---	0.11	Mercury(T)	0.01(t)
		---	0.05	Molybdenum(T)	---
		---	0.11	Nickel	TVS
		---	WS	Nickel(T)	---
		---	0.002	Nickel(T)	100
				Selenium	TVS
				Silver	TVS
				Uranium	varies*
				Zinc	TVS
					TVS

2a. Mainstem of St. Vrain Creek, including all tributaries and wetlands, from the boundary of the Indian Peaks Wilderness Area and Rocky Mountain National Park to the eastern boundary of Roosevelt National Forest.					
COSPSV02A	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)	---
Qualifiers:		---	7.0	Beryllium	---
Other:		6.5 - 9.0	---	Cadmium	TVS
Temporary Modification(s):		---	150*	Cadmium(T)	---
Arsenic(chronic) = hybrid		---	126	Chromium III	---
Expiration Date of 12/31/2024				Chromium III(T)	---
*chlorophyll a (mg/m2)(chronic) = applies only above the facilities listed at 38.5(4).		Inorganic (mg/L)		Chromium VI	TVS
*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).		acute	chronic	Copper	TVS
*Uranium(acute) = See 38.5(3) for details.		TVS	TVS	Iron	---
*Uranium(chronic) = See 38.5(3) for details.		---	0.75	Iron(T)	---
		---	250	Lead	TVS
		0.019	0.011	Lead(T)	---
		0.005	---	Manganese	TVS
		10	---	Mercury(T)	---
		---	0.11*	Mercury(T)	0.01(t)
		---	0.05	Molybdenum(T)	---
		---	0.11*	Nickel	TVS
		---	WS	Nickel(T)	---
		---	0.002	Nickel(T)	100
				Selenium	TVS
				Silver	TVS
				Uranium	varies*
				Zinc	TVS
					TVS

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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS St. Vrain Creek Basin

2b. Mainstem of St. Vrain Creek, including all tributaries and wetlands, from the eastern boundary of Roosevelt National Forest to Hygiene Road.						
COSPSV02B	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 ---
		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 TVS
Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2024 *chlorophyll a (mg/m2)(chronic) = applies only above the facilities listed at 38.5(4). *Phosphorus(chronic) = applies only above the facilities listed at 38.5(4). <u>*Uranium(acute) = See 38.5(3) for details.</u> <u>*Uranium(chronic) = See 38.5(3) for details.</u>		chlorophyll a (mg/m2)	---	150*	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	---	0.11*	Molybdenum(T)	--- 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

3. Mainstem of St. Vrain Creek from Hygiene Road to the confluence with the South Platte River.						
COSPSV03	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	acute chronic		
Reviewable	Aq Life Warm 1 <u>Water Supply</u> Recreation E	Temperature °C	WS-I	WS-I	Aluminum	--- ---
		acute	chronic		Arsenic	340 ---
		D.O. (mg/L)	---	5.0	Arsenic(T)	--- <u>7.60.02</u>
Qualifiers:		pH	6.5 - 9.0	---	Beryllium	--- ---
Other:		chlorophyll a (mg/m2)	---	---	Cadmium	TVS TVS
Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2024 *Uranium(acute) = See 38.5(3) for details. *Uranium(chronic) = See 38.5(3) for details.		E. Coli (per 100 mL)	---	126	Cadmium(T)	<u>5.0</u> ---
		Inorganic (mg/L)			Chromium III	TVS--- TVS
		acute chronic			Chromium III(T)	--- <u>50</u> <u>400---</u>
		Ammonia	TVS	TVS	Chromium VI	TVS TVS
		Boron	---	0.75	Copper	TVS TVS
		Chloride	---	---250	Iron	--- <u>WS</u>
		Chlorine	0.019	0.011	Iron(T)	--- 1000
		Cyanide	0.005	---	Lead	TVS TVS
		Nitrate	<u>40010</u>	---	Lead(T)	<u>50</u> ---
		Nitrite	---0.5	0.5---	Manganese	TVS TVS/WS
		Phosphorus	---	---	Mercury(T)	--- 0.01(±)
		Sulfate	---	---WS	Molybdenum(T)	--- 150
		Sulfide	---	0.002	Nickel	TVS TVS
					Nickel(T)	--- <u>100</u>
					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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS St. Vrain Creek Basin

4a. Mainstem of Left Hand Creek, including all tributaries and wetlands, from the source to a point immediately below the confluence with James Creek, except for specific listings in Segment 4b.

COSPSV04A	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	TVS TVS
Temporary Modification(s):		chlorophyll a (mg/m2)	--- 150	Cadmium(T)	5.0 ---
Arsenic(chronic) = hybrid		E. Coli (per 100 mL)	--- 126	Chromium III	--- TVS
Expiration Date of 12/31/2024				Chromium III(T)	50 ---
*Uranium(acute) = See 38.5(3) for details.		Inorganic (mg/L)		Chromium VI	TVS TVS
*Uranium(chronic) = See 38.5(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)	--- 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

4b. Mainstem of James Creek, including all tributaries and wetlands, from the source to the confluence with Left Hand Creek.

COSPSV04B	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 TVS
Temporary Modification(s):		chlorophyll a (mg/m2)	--- 150	Cadmium(T)	5.0 ---
Arsenic(chronic) = hybrid		E. Coli (per 100 mL)	--- 126	Chromium III	--- TVS
Expiration Date of 12/31/2024				Chromium III(T)	50 ---
*Uranium(acute) = See 38.5(3) for details.		Inorganic (mg/L)		Chromium VI	TVS TVS
*Uranium(chronic) = See 38.5(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)	--- 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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS St. Vrain Creek Basin

4c. Mainstem of Left Hand Creek, including all tributaries and wetlands, from a point immediately below the confluence with James Creek to Highway 36.							
COSPSV04C	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
		D.O. (spawning)	---	7.0	Beryllium	---	---
Qualifiers:		pH	6.5 - 9.0	---	Cadmium	TVS	TVS
Other:		chlorophyll a (mg/m2)	---	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 12/31/2024					Chromium VI	TVS	TVS
*Uranium(acute) = See 38.5(3) for details.		Inorganic (mg/L)			Copper	TVS	TVS
*Uranium(chronic) = See 38.5(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	TVS/WS
		Cyanide	0.005	---	Mercury(T)	---	0.01(†)
		Nitrate	10	---	Molybdenum(T)	---	150
		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

5. Mainstem of Left Hand Creek, including all tributaries and wetlands from Highway 36 to the confluence with St. Vrain Creek.							
COSPSV05	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT		acute	chronic	
Reviewable	Aq Life <u>Warm-2Cold 1</u>	Temperature °C	WS-ICS-II	WS-ICS-II	Aluminum	---	---
	Recreation E		acute	chronic	Arsenic	340	---
Water Supply		D.O. (mg/L)	---	56.0	Arsenic(T)	---	0.02-40 ^A
		<u>D.O. (spawning)</u>	---	7.0	Beryllium	---	---
Qualifiers:		pH	6.5 - 9.0	---	Cadmium	TVS	TVS
Other:		chlorophyll a (mg/m2)	---	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 12/31/2024					Chromium VI	TVS	TVS
*Uranium(acute) = See 38.5(3) for details.		Inorganic (mg/L)			Copper	TVS	TVS
*Uranium(chronic) = See 38.5(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	TVS/WS
		Cyanide	0.005	---	Mercury(T)	---	0.01(†)
		Nitrate	10	---	Molybdenum(T)	---	150
		Nitrite	---0.5	0.5---	Nickel	TVS	TVS
		Phosphorus	---	0.17	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

St. Vrain Creek Basin

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

COSPSV06	Classifications	Physical and Biological		Metals (ug/L)			
Designation		DM	MWAT	acute		chronic	
UP	Agriculture						
	Aq Life Warm 2	WS-III	WS-III	Aluminum	---	---	
	Recreation E	acute	chronic	Arsenic	340	---	
	<u>Water Supply</u>	---	5.0	Arsenic(T)	---	<u>1000.02</u>	
Qualifiers:		pH	6.5 - 9.0	Beryllium	---	---	
Other:		chlorophyll a (mg/m2)	---	Cadmium	TVS	TVS	
Temporary Modification(s):		E. Coli (per 100 mL)	---	<u>Cadmium(T)</u>	<u>5.0</u>	---	
<u>Arsenic(chronic) = hybrid</u>		Inorganic (mg/L)		Chromium III	<u>TVS---</u>	TVS	
<u>Expiration Date of 12/31/2024</u>			acute	chronic	Chromium III(T)	<u>---</u> <u>50</u>	<u>100---</u>
Iron(chronic) = current condition		Ammonia	TVS	TVS	Chromium VI	TVS	TVS
Manganese(ac/ch) = current condition		Boron	---	0.75	Copper	TVS	TVS
Expiration Date of 12/31/2020		Chloride	---	<u>---250-</u>	<u>Iron</u>	---	<u>WS</u>
<u>*Uranium(acute) = See 38.5(3) for details.</u>		Chlorine	0.019	0.011	Iron(T)	---	1000
<u>*Uranium(chronic) = See 38.5(3) for details.</u>		Cyanide	0.005	---	Lead	TVS	TVS
		Nitrate	<u>10010</u>	---	<u>Lead(T)</u>	<u>50</u>	---
		Nitrite	<u>---0.5-</u>	<u>0.5---</u>	Manganese	TVS	TVS/ <u>WS</u>
		Phosphorus	---	---	Mercury(T)	---	0.01(†)
		Sulfate	---	<u>---WS-</u>	Molybdenum(T)	---	150
		Sulfide	---	0.002	Nickel	TVS	TVS
					<u>Nickel(T)</u>	---	<u>100</u>
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	<u>varies*</u>	<u>varies*</u>
					Zinc	TVS	TVS

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

COSPSV07	Classifications	Physical and Biological		Metals (ug/L)			
Designation		DM	MWAT	acute		chronic	
Reviewable	Agriculture						
	Aq Life Warm 1	WL	WL	Aluminum	---	---	
	Recreation E	acute	chronic	Arsenic	340	---	
	Water Supply	---	5.0	Arsenic(T)	---	0.02	
	DUWS*	pH	6.5 - 9.0	Beryllium	---	---	
Qualifiers:		chlorophyll a (ug/L)	---	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 12/31/2024		Ammonia	TVS	TVS	Chromium VI	TVS	TVS
Iron(chronic) = current condition		Boron	---	0.75	Copper	TVS	TVS
Manganese(ac/ch) = current condition		Chloride	---	250	Iron	---	WS
Expiration Date of 12/31/2020		Chlorine	0.019	0.011	Iron(T)	---	1000
<u>*Classification: DUWS applies to Boulder, Spurgeon and Left Hand Valley Reservoirs only.</u>		Cyanide	0.005	---	Lead	TVS	TVS
<u>*Uranium(acute) = See 38.5(3) for details.</u>		Nitrate	10	---	Lead(T)	50	---
<u>*Uranium(chronic) = See 38.5(3) for details.</u>		Nitrite	<u>---0.5-</u>	<u>0.5---</u>	Manganese	TVS	TVS/WS
		Phosphorus	---	---	Mercury(T)	---	0.01(†)
		Sulfate	---	WS	Molybdenum(T)	---	150
		Sulfide	---	0.002	Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	<u>varies*</u>	<u>varies*</u>
					Zinc	TVS	TVS

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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS St. Vrain Creek Basin

8. All lakes and reservoirs tributary to St. Vrain Creek that are within the boundary of the Indian Peaks Wilderness Area and Rocky Mountain National Park.							
COSPSV08	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			Arsenic(T)	---	0.02	
Qualifiers:				D.O. (mg/L)	---	6.0	
Other:				D.O. (spawning)	---	7.0	
<p>*Uranium(acute) = See 38.5(3) for details.</p> <p>*Uranium(chronic) = See 38.5(3) for details.</p>		6.5 - 9.0	---	pH	TVS	TVS	
		---	---	chlorophyll a (ug/L)	5.0	---	
		---	126	E. Coli (per 100 mL)	---	TVS	---
		Inorganic (mg/L)			Chromium III	50	---
		acute	chronic		Chromium III(T)	TVS	TVS
		TVS	TVS	Ammonia	Chromium VI	TVS	TVS
		---	0.75	Boron	Copper	TVS	TVS
		---	250	Chloride	Iron	---	WS
		0.019	0.011	Chlorine	Iron(T)	---	1000
		0.005	---	Cyanide	Lead	TVS	TVS
		10	---	Nitrate	Lead(T)	50	---
		---	---	Nitrite	Manganese	TVS	TVS/WS
		---	---	Phosphorus	Mercury(T)	---	0.01(†)
		---	WS	Sulfate	Molybdenum(T)	---	150
		---	0.002	Sulfide	Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	varies*	varies*
					Zinc	TVS	TVS

9. All lakes and reservoirs tributary to St. Vrain Creek from sources to Hygiene Road, including Button Rock Reservoir, except as specified in Segment 8.							
COSPSV09	Classifications	Physical and Biological			Metals (ug/L)		
Designation		DM	MWAT		acute	chronic	
Reviewable	Agriculture						
	Aq Life Cold 1	CL,CLL	CL,CLL	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	
<p>Temporary Modification(s):</p> <p>Arsenic(chronic) = hybrid</p> <p>Expiration Date of 12/31/2024</p> <p>*Uranium(acute) = See 38.5(3) for details.</p> <p>*Uranium(chronic) = See 38.5(3) for details.</p>		6.5 - 9.0	---	pH	TVS	TVS	
		---	---	chlorophyll a (ug/L)	5.0	---	
		---	126	E. Coli (per 100 mL)	---	TVS	---
		Inorganic (mg/L)			Chromium III	50	---
		acute	chronic		Chromium III(T)	TVS	TVS
		TVS	TVS	Ammonia	Chromium VI	TVS	TVS
		---	0.75	Boron	Copper	TVS	TVS
		---	250	Chloride	Iron	---	WS
		0.019	0.011	Chlorine	Iron(T)	---	1000
		0.005	---	Cyanide	Lead	TVS	TVS
		10	---	Nitrate	Lead(T)	50	---
		---	---	Nitrite	Manganese	TVS	TVS/WS
		---	---	Phosphorus	Mercury(T)	---	0.01(†)
		---	WS	Sulfate	Molybdenum(T)	---	150
		---	0.002	Sulfide	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS St. Vrain Creek Basin

10. All lakes and reservoirs tributary to Left Hand Creek from sources to Highway 36.						
COSPSV10	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	acute chronic		
Reviewable	Aq Life Cold 1 Recreation E Water Supply DUWS*	CL	CL	Aluminum	---	---
		acute	chronic	Arsenic	340	---
		---	6.0	Arsenic(T)	---	0.02
		---	7.0	Beryllium	---	---
Qualifiers:	pH	6.5 - 9.0	---	Cadmium	TVS	TVS
Other:	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
		TVS	TVS	Copper	TVS	TVS
		---	0.75	Iron	---	WS
		---	250	Iron(T)	---	1000
		0.019	0.011	Lead	TVS	TVS
		0.005	---	Lead(T)	50	---
		10	---	Manganese	TVS	TVS/WS
		---	0.025*	Mercury(T)	---	0.01(†)
		---	WS	Molybdenum(T)	---	150
		---	0.002	Nickel	TVS	TVS
		---	---	Nickel(T)	---	100
		---	---	Selenium	TVS	TVS
		---	---	Silver	TVS	TVS(tr)
		---	---	Uranium	varies*	varies*
		---	---	Zinc	TVS	TVS
11. Barbour Ponds.						
COSPSV11	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	acute chronic		
Reviewable	Aq Life Warm 1 Recreation E Water Supply	WL	WL	Aluminum	---	---
		acute	chronic	Arsenic	340	---
		---	5.0	Arsenic(T)	---	0.02
Qualifiers:	pH	6.5 - 9.0	---	Beryllium	---	---
Other:	chlorophyll a (ug/L)	---	---	Cadmium	TVS	TVS
	E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0	---
		Inorganic (mg/L)		Chromium III	---	TVS
		acute	chronic	Chromium III(T)	50	---
		TVS	TVS	Chromium VI	TVS	TVS
		---	0.75	Copper	TVS	TVS
		---	250	Iron	---	WS
		0.019	0.011	Iron(T)	---	1000
		0.005	---	Lead	TVS	TVS
		10	---	Lead(T)	50	---
		---	---	Manganese	TVS	TVS/WS
		---	---	Mercury(T)	---	0.01(†)
		---	WS	Molybdenum(T)	---	150
		---	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

D.O. = dissolved oxygen
 DM = daily maximum
 MWAT = maximum weekly average temperature
 See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS St. Vrain Creek Basin

12. All lakes and reservoirs tributary to Left Hand Creek from Highway 36 to the confluence with St. Vrain Creek, except as specified in Segment 7.							
COSPSV12	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT				
Reviewable	Aq Life Warm 2	WL	WL	Aluminum	acute	chronic	
	Recreation E	acute	chronic	Arsenic	---	---	
	Water Supply	D.O. (mg/L)	---	5.0	Arsenic(T)	---	0.02
Qualifiers:		pH	6.5 - 9.0	---	Beryllium	---	---
Water + Fish Standards		chlorophyll a (ug/L)	---	---	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				
Expiration Date of 12/31/2024		Ammonia	TVS	TVS	Chromium III(T)	50	---
<u>*Uranium(acute) = See 38.5(3) for details.</u>		Boron	---	0.75	Chromium VI	TVS	TVS
<u>*Uranium(chronic) = See 38.5(3) for details.</u>		Chloride	---	250	Copper	TVS	TVS
		Chlorine	0.019	0.011	Iron	---	WS
		Cyanide	0.005	---	Iron(T)	---	1000
		Nitrate	10	---	Lead	TVS	TVS
		Nitrite	0.5	0.5	Lead(T)	50	---
		Phosphorus	---	---	Manganese	TVS	TVS/WS
		Sulfate	---	WS	Mercury(T)	---	0.01(†)
		Sulfide	---	0.002	Molybdenum(T)	---	150
					Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	<u>varies*</u>	<u>varies*</u>
					Zinc	TVS	TVS
13. All lakes and reservoirs tributary to St. Vrain Creek from Hygiene Road to the confluence with the South Platte River, except as specified in Segments 7, 10, 11 and 12.							
COSPSV13	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT				
Reviewable	Aq Life Warm 2	WL	WL	Aluminum	acute	chronic	
	Recreation E	acute	chronic	Arsenic	340	---	
	Water Supply	D.O. (mg/L)	---	5.0	Arsenic(T)	---	0.02-10 ^A
	DUWS*	pH	6.5 - 9.0	---	Beryllium	---	---
Qualifiers:		chlorophyll a (ug/L)	---	---	Cadmium	TVS	TVS
Other:		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0	---
*Classification: DUWS applies to Burch lake only.		Inorganic (mg/L)			Chromium III	---	TVS
<u>*Uranium(acute) = See 38.5(3) for details.</u>		acute	chronic				
<u>*Uranium(chronic) = See 38.5(3) for details.</u>		Ammonia	TVS	TVS	Chromium III(T)	50	---
		Boron	---	0.75	Chromium VI	TVS	TVS
		Chloride	---	250	Copper	TVS	TVS
		Chlorine	0.019	0.011	Iron	---	WS
		Cyanide	0.005	---	Iron(T)	---	1000
		Nitrate	10	---	Lead	TVS	TVS
		Nitrite	0.5	0.5	Lead(T)	50	---
		Phosphorus	---	---	Manganese	TVS	TVS/WS
		Sulfate	---	WS	Mercury(T)	---	0.01(†)
		Sulfide	---	0.002	Molybdenum(T)	---	150
					Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	<u>varies*</u>	<u>varies*</u>
					Zinc	TVS	TVS

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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Middle South Platte River Basin

1a. Mainstem of the South Platte River from a point immediately below the confluence with Big Dry Creek to the confluence with St. Vrain Creek.							
COSPMS01A	Classifications	Physical and Biological			Metals (ug/L)		
Designation			DM	MWAT		acute	chronic
UPReviewable	Agriculture		WS-III	WS-III	Aluminum	---	---
	Aq Life Warm 21	Temperature °C	acute	chronic	Arsenic	340	---
	Recreation E				Arsenic(T)	---	0.02 ^A
	Water Supply	D.O. (mg/L)	varies*	varies*	Beryllium	---	---
Qualifiers:		pH	6.5 - 9.0	---	Cadmium	TVS	TVS
Water + Fish Standards		chlorophyll a (mg/m ²)	---	---	Cadmium(T)	5.0	---
Other:		E. Coli (per 100 mL)	---	126	Chromium III	---	TVS
Temporary Modification(s):		Inorganic (mg/L)			Chromium III(T)	50	---
Arsenic(chronic) = hybrid			acute	chronic	Chromium VI	TVS	TVS
Expiration Date of 12/31/2024		Ammonia	TVS*	TVS*	Copper	---	18.0*
Ammonia(acute) = See section 38.6(4) attached table for site-specific standards.		Boron	---	0.75	Copper	35-426.4	---
Ammonia(chronic) = See section 38.6(4) attached table for site-specific standards.		Chloride	---	250	Copper	---	23.5
*Copper(acute) = Copper BLM-based FMB		Chlorine	0.019	0.011	Iron	---	WS
Cu FMB(ac)= 35-426.4 ug/l		Cyanide	0.005	---	Iron(T)	---	1000
*Copper(chronic) = Copper BLM-based FMB		Nitrate	10	---	Lead	TVS	TVS
Cu FMB(ch)= 23.5-18.0 ug/l		Nitrite	--0.5	0.5---	Lead(T)	50	---
*Uranium(acute) = See 38.5(3) for details.		Phosphorus	---	---	Manganese	TVS	TVS/WS
*Uranium(chronic) = See 38.5(3) for details.		Sulfate	---	WS	Mercury(T)	---	0.01(t)
*D.O. (mg/L)(acute) = See section 38.6(4) attached table for site-specific standards.		Sulfide	---	0.002	Molybdenum(T)	---	150
*D.O. (mg/L)(chronic) = See section 38.6(4) attached table for site-specific standards.					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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Middle South Platte River Basin

1b. Mainstem of the South Platte River from a point immediately below the confluence with St. Vrain Creek to the Weld/Morgan County Line.							
COSPMS01B	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture		DM	MWAT			
Reviewable	Aq Life Warm 21	Temperature °C	WS-III	WS-III	Aluminum	acute	chronic
	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	---	---
Water + Fish Standards		chlorophyll a (mg/m ²)	---	---	Cadmium	TVS	TVS
		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0	---
Other:		Inorganic (mg/L)			Chromium III	---	TVS
			acute	chronic	Chromium III(T)	50	---
Temporary Modification(s):		Ammonia	TVS	TVS	Chromium VI	TVS	TVS
Arsenic(chronic) = hybrid		Boron	---	0.75	Copper	TVS	TVS
Expiration Date of 12/31/2024		Chloride	---	250	Iron	---	WS
*Uranium(acute) = See 38.5(3) for details.		Chlorine	0.019	0.011	Iron(T)	---	1000
*Uranium(chronic) = See 38.5(3) for details.		Cyanide	0.005	---	Lead	TVS	TVS
		Nitrate	10	---	Lead(T)	50	---
		Nitrite	--0.5	0.5---	Manganese	TVS	TVS/WS
		Phosphorus	---	---	Mercury(T)	---	0.01(†)
		Sulfate	---	WS	Molybdenum(T)	---	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

D.O. = dissolved oxygen
 DM = daily maximum
 MWAT = maximum weekly average temperature
 See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Middle South Platte River Basin

2. Deleted.						
COSPMS02	Classifications	Physical and Biological			Metals (ug/L)	
Designation		DM	MWAT		acute	chronic
Reviewable						
Qualifiers:		acute	chronic			
Other:						
		Inorganic (mg/L)				
		acute	chronic			
3a. All tributaries to the South Platte River, including all wetlands, from a point immediately below the confluence with Big Dry Creek to the Weld/Morgan County line, except for specific listings in the subbasins of the South Platte River, and in Segments 3b, 5a, 5b, 5c, and 6.						
COSPMS03A	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT		acute	chronic
UP	Aq Life Warm 2	Temperature °C	WS-I	WS-I	Aluminum	---
	Recreation E	acute	chronic		Arsenic	340
	Water Supply	D.O. (mg/L)	---	5.0	Arsenic(T)	---
Qualifiers:		pH	6.5 - 9.0	---	Beryllium	---
Water + Fish Standards		chlorophyll a (mg/m ²)	---	150*	Cadmium	TVS
Other:		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0
		Inorganic (mg/L)			Chromium III	---
		acute	chronic		Chromium III(T)	50
Temporary Modification(s):		Ammonia	TVS	TVS	Chromium VI	TVS
Arsenic(chronic) = hybrid		Boron	---	0.75	Copper	TVS
Expiration Date of 12/31/2024		Chloride	---	250	Iron	---
*chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 38.5(4).		Chlorine	0.019	0.011	Iron(T)	---
*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).		Cyanide	0.005	---	Lead	TVS
*Uranium(acute) = See 38.5(3) for details.		Nitrate	10	---	Lead(T)	50
*Uranium(chronic) = See 38.5(3) for details.		Nitrite	--0.5	0.5---	Manganese	TVS
		Phosphorus	---	0.17*	Mercury(T)	---
		Sulfate	---	WS	Molybdenum(T)	---
		Sulfide	---	0.002	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Middle South Platte River Basin

3b. Hayesmount Tributaries including the Upper Hayesmount Tributary from the source to the confluence with Box Elder Creek and the Lower Hayesmount Tributaries from the source to the Denver Hudson Canal.						
COSPMS03B	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	--- ---
	Water Supply	acute	chronic	Arsenic	340 ---	
	Recreation E	D.O. (mg/L)	---	narrative*	Arsenic(T)	--- 4000_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--- TVS
		acute	chronic	Chromium III(T)	--50 400---	
		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	40010	---	Lead(T)	50 ---
		Nitrite	--0.5	0.5---	Manganese	TVS TVS/ WS
		Phosphorus	---	0.17	Mercury(T)	--- 0.01(†)
		Sulfate	---	--WS	Molybdenum(T)	--- 150
		Sulfide	---	0.002	Nickel	TVS TVS
					Nickel(T)	--- 100
					Selenium	TVS TVS
					Silver	TVS TVS
					Uranium	--varies* --varies*
					Zinc	TVS TVS
4. Barr Lake and Milton Reservoir.						
COSPMS04	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	acute chronic		
UP	Aq Life Warm 2	Temperature °C	WL	WL	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	--- ---
Water + Fish Standards		chlorophyll a (mg/m ²)	---	---	Cadmium	TVS TVS
Other:		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0 ---
		Inorganic (mg/L)			Chromium III	--- TVS
		acute	chronic	Chromium III(T)	50 ---	
		Ammonia	TVS	TVS	Chromium VI	TVS TVS
		Boron	---	0.75	Copper	TVS TVS
		Chloride	---	250	Iron	--- WS
		Chlorine	0.019	0.011	Iron(T)	--- 1000
		Cyanide	0.005	---	Lead	TVS TVS
		Nitrate	10	---	Lead(T)	50 ---
		Nitrite	--0.5	0.5---	Manganese	TVS TVS/WS
		Phosphorus	---	---	Mercury(T)	--- 0.01(†)
		Sulfate	---	WS	Molybdenum(T)	--- 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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Middle South Platte River Basin

5a. Mainstem of Lone Tree Creek from the source to the confluence with the South Platte River.						
COSPM505A	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT			
Reviewable	Aq Life Warm 2 Recreation N Water Supply	acute	chronic	acute	chronic	
	Temperature °C	WS-I	WS-I	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)	---	---	Beryllium	---	---
	E. Coli (per 100 mL)	---	630	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)	---	1000
	Nitrate	10	---	Lead	TVS	TVS
	Nitrite	0.5	0.5	Lead(T)	50	---
	Phosphorus	---	0.17*	Manganese	TVS	TVS/WS
	Sulfate	---	WS	Mercury(T)	---	0.01(†)
	Sulfide	---	0.002	Molybdenum(T)	---	150
				Nickel	TVS	TVS
				Nickel(T)	---	100
				Selenium	TVS	TVS
				Silver	TVS	TVS
				Uranium	---	---varies*
				Zinc	TVS	TVS

*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).
*Uranium(acute) = See 38.5(3) for details.
*Uranium(chronic) = See 38.5(3) for details.

5b. Mainstem of Box Elder Creek from the confluence with Coyote Run to the Denver Hudson Canal.						
COSPM505B	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT			
UP	Aq Life Warm 2 <u>Water Supply</u> Recreation N	acute	chronic	acute	chronic	
	Temperature °C	WS-III	WS-III	Aluminum	---	---
	D.O. (mg/L)	---	4.7*	Arsenic	340	---
	pH	6.5 - 9.0	---	Arsenic(T)	---	1000-02-10 ^A
	chlorophyll a (mg/m ²)	---	---	Beryllium	---	---
	E. Coli (per 100 mL)	---	630	Cadmium	TVS	TVS
		Inorganic (mg/L)		Cadmium(T)	5.0	---
		acute	chronic	Chromium III	TVS---	TVS
	Ammonia	TVS	TVS	Chromium III(T)	50	100---
	Boron	---	0.75	Chromium VI	TVS	TVS
	Chloride	---	250	Copper	TVS	TVS
	Chlorine	0.019	0.011	Iron	---	WS
	Cyanide	0.005	---	Iron(T)	---	1000
	Nitrate	10	---	Lead	TVS	TVS
	Nitrite	0.5	10	Lead(T)	50	---
	Phosphorus	---	---	Manganese	TVS	TVS/WS
	Sulfate	---	WS	Mercury(T)	---	0.01(†)
	Sulfide	---	0.002	Molybdenum(T)	---	150
				Nickel	TVS	TVS
				Nickel(T)	---	100
				Selenium	TVS	TVS
				Silver	TVS	TVS
				Uranium	---varies*	---varies*
				Zinc	TVS	TVS

*D.O. (mg/L)(chronic) = 15th percentile of D.O. measurements collected between 6:30 a.m. and 6:30 p.m.

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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Middle South Platte River Basin

5c. Mainstems of Crow Creek and Box Elder Creek from their sources to their confluences with the South Platte River, except for <u>specific</u> listings in Segment 5b.							
COSPMS05C	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT		acute	chronic	
Reviewable	Aq Life Warm <u>21</u>	Temperature °C	WS-II	WS-II	Aluminum	---	---
	<u>Water Supply</u>		acute	chronic	Arsenic	340	---
	Recreation N	D.O. (mg/L)	---	5.0	Arsenic(T)	---	<u>4000.02</u>
Qualifiers:		pH	6.5 - 9.0	---	Beryllium	---	---
Other:	*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4). *Uranium(acute) = See 38.5(3) for details. *Uranium(chronic) = See 38.5(3) for details.	chlorophyll a (mg/m ²)	---	---	Cadmium	TVS	TVS
		E. Coli (per 100 mL)	---	630	Cadmium(T)	<u>5.0</u>	---
		Inorganic (mg/L)			Chromium III	<u>TVS---</u>	TVS
		acute	chronic		Chromium III(T)	<u>---</u> <u>50</u>	<u>400---</u>
		Ammonia	TVS	TVS	Chromium VI	TVS	TVS
		Boron	---	0.75	Copper	TVS	TVS
		Chloride	---	<u>---</u> <u>250</u>	Iron	---	<u>WS</u>
		Chlorine	0.019	0.011	Iron(T)	---	1000
		Cyanide	0.005	---	Lead	TVS	TVS
		Nitrate	<u>40010</u>	---	Lead(T)	<u>50</u>	---
		Nitrite	<u>---</u> <u>0.5</u>	<u>0.5---</u>	Manganese	TVS	TVS/ <u>WS</u>
		Phosphorus	---	0.17*	Mercury(T)	---	0.01(†)
		Sulfate	---	<u>---</u> <u>WS</u>	Molybdenum(T)	---	150
		Sulfide	---	0.002	Nickel	TVS	TVS
					Nickel(T)	---	<u>100</u>
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	<u>---</u> <u>varies*</u>	<u>---</u> <u>varies*</u>
					Zinc	TVS	TVS

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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Middle South Platte River Basin

6. Lost Creek from the source to Interstate 76, including all its tributaries, stock ponds and wetlands.							
COSPMS06	Classifications	Physical and Biological			Metals (ug/L)		
Designation		DM	MWAT		acute	chronic	
UP	Agriculture Aq Life Warm 2 Recreation N	Temperature °C	WS-III	WS-III	Aluminum	---	---
			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)	---	---	Beryllium(T)	---	100
		E. Coli (per 100 mL)	---	630	Cadmium	---	---
			Inorganic (mg/L)		Cadmium(T)	---	10
			acute	chronic	Chromium III	---	---
		Ammonia	---	---	Chromium III(T)	---	100
		Boron	---	0.75	Chromium VI	---	---
		Chloride	---	---	Chromium VI(T)	---	100
		Chlorine	---	---	Copper	---	---
		Cyanide	0.2	---	Copper(T)	---	200
		Nitrate	100	---	Iron	---	---
		Nitrite	---10 ⁻	40---	Lead	---	---
		Phosphorus	---	0.17*	Lead(T)	---	100
		Sulfate	---	---	Manganese	---	---
		Sulfide	---	0.002	Manganese(T)	---	200
					Mercury(T)	---	---
					Molybdenum(T)	---	150
					Nickel	---	---
					Nickel(T)	---	200
					Selenium	---	---
					Selenium(T)	---	20
					Silver	---	---
					Uranium	---varies*	---varies*
					Zinc	---	---
					Zinc(T)	---	2000

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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Middle South Platte River Basin

7. All lakes and reservoirs tributary to the South Platte River from a point immediately below the confluence with Big Dry Creek to the Weld/Morgan County line, except for **specific** listings in the subbasins of the South Platte River, and in **Segment segments 4 and 8**.

COSPMS07	Classifications	Physical and Biological			Metals (ug/L)		
			DM	MWAT		acute	chronic
Designation Reviewable	Agriculture		WL	WL	Aluminum	---	---
	Aq Life Warm 2	Temperature °C	WL	WL	Arsenic	340	---
	Recreation E		acute	chronic	Arsenic(T)	---	0.02
	Water Supply	D.O. (mg/L)	---	5.0	Beryllium	---	---
Qualifiers:		pH	6.5 - 9.0	---	Cadmium	TVS	TVS
Water + Fish Standards		chlorophyll a (mg/m ²)	---	---	Cadmium(T)	5.0	---
Other:		E. Coli (per 100 mL)	---	126	Chromium III	---	TVS
Temporary Modification(s):		Inorganic (mg/L)			Chromium III(T)	50	---
Arsenic(chronic) = hybrid			acute	chronic	Chromium VI	TVS	TVS
Expiration Date of 12/31/2024		Ammonia	TVS	TVS	Copper	TVS	TVS
<u>*Uranium(acute) = See 38.5(3) for details.</u>		Boron	---	0.75	Iron	---	WS
<u>*Uranium(chronic) = See 38.5(3) for details.</u>		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	<u>---0.5</u>	<u>0.5---</u>	Mercury(T)	---	0.01(†)
		Phosphorus	---	---	Molybdenum(T)	---	150
		Sulfate	---	WS	Nickel	TVS	TVS
		Sulfide	---	0.002	Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	<u>---varies*</u>	<u>---varies*</u>
					Zinc	TVS	TVS

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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Middle South Platte River Basin

8. Riverside Reservoir.

COSPMS08	Classifications	Physical and Biological			Metals (ug/L)			
Designation		DM	MWAT	acute	chronic			
UP	Agriculture							
	Aq Life Warm 1	Temperature °C	WL	WL	Arsenic	340	---	
	Recreation E				Arsenic(T)	---	0.02	
	Water Supply				Cadmium	TVS	TVS	
Qualifiers:				acute	chronic	Cadmium(T)	5.0	---
Other:		D.O. (mg/L)	---	5.0	Chromium III	---	TVS	
	*chlorophyll a (ug/L)(chronic) = applies only above the facilities listed at 38.5(4), applies only to lakes and reservoirs larger than 25 acres surface area.	pH	6.5 - 9.0	---	Chromium III(T)	50	---	
	Phosphorus(chronic) = applies only above the facilities listed at 38.5(4), applies only to lakes and reservoirs larger than 25 acres surface area.	chlorophyll a (ug/L)	---	20	Chromium VI	TVS	TVS	
	*Uranium(acute) = See 38.5(3) for details.	E. Coli (per 100 mL)	---	126	Copper	TVS	TVS	
	*Uranium(chronic) = See 38.5(3) for details.				Inorganic (mg/L)			
				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)	---	150	
		Nitrite	0.5	---	Nickel	TVS	TVS	
		Phosphorus	---	0.083*	Nickel(T)	---	100	
		Sulfate	---	WS	Selenium	TVS	TVS	
		Sulfide	---	0.002	Silver	TVS	TVS	
					Uranium	varies*	varies*	
					Zinc	TVS	TVS	

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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

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

Dissolved Oxygen:

STANDARDS

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

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

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

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

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

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

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

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

Footnotes

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

2.—A minimum of four independent daily means must be used to calculate the average for the 7-Day Average standard. A minimum of eight independent daily means must be used to calculate the average for the 30-Day Average standard. The four days and the eight days must be representative of the 7-Day and the 30-Day periods respectively. The daily mean shall be the mean of the daily high and low values. In calculating the mean values, the dissolved oxygen saturation value shall be used in place of any dissolved oxygen measurements which exceed saturation.

3.—The 7-Day Mean Minimum is the average of the daily minimums measured at a location on each day during any 7-Day period.

4.—During a 24 hour day, dissolved oxygen levels are likely to be lower during the nighttime when there is no photosynthesis. The dissolved oxygen levels should not drop below the acute standard (ELS acute standard of 3.0 mg/L or the OLS standard of 2.0 mg/L). However, if during the ELS period multiple measurements are below 3.0 mg/L during the same nighttime period, the multiple measurements shall be considered a single exceedance of the acute standard. For measurements below 2.0 mg/L during either the ELS or the OLS periods, each hourly measurement below 2.0 mg/L shall be considered an exceedance of the acute standard.

5.—In July, the dissolved oxygen level in Segment 1a may be lower than the 3.0 mg/L acute standard for up to 14 exceedances in any one year and up to a total of 21 exceedances in three years before there is a determination that the acute dissolved oxygen standards is not being met. Exceedances shall be counted as described in Footnote 4.

Ammonia:

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

Ammonia

Warm Water = (mg/l as N) Total

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

$$\text{chronic (Apr 1 - July 31)} = \left(\frac{0.0577}{1 + 10^{7.688 - pH}} + \frac{2.487}{1 + 10^{pH - 7.688}} \right) * \text{MIN} \left(2.85, 1.45 * 10^{0.028(25 - T)} \right)$$

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

NH₃ = old TVS

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

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

1. Mainstem of the Big Thompson River, including all tributaries and wetlands, within Rocky Mountain National Park, except for specific listings in Segment 2.							
COSPBT01	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 38.5(3) for details.</u> <u>*Uranium(chronic) = See 38.5(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	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	TVSWS
					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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Big Thompson River Basin

2. Mainstem of the Big Thompson River from the boundary of Rocky Mountain National Park to the Greeley-Loveland Canal Diversion (40.397884, -105.106482). All tributaries to the Big Thompson River, including all tributaries and wetlands, from the boundary of Rocky Mountain National Park to the Home Supply Canal diversion, except for the specific listing in Segment 7; mainstem of Black Canyon Creek and Glacier Creek below Estes Park water treatment plant. (40.424430, -105.210449).

COSPBT02	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	---
		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	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 12/31/2024					Chromium III(T)	50	---
					Chromium VI	TVS	TVS
					Copper	TVS	---
chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 38.5(4).					Copper	---	7.5
Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).					Copper	11	TVS
*Copper(acute) = <u>148.4</u> ug/L from immediately above the Upper Thompson Sanitation District's wastewater treatment plant outfall to the Home Supply Canal Diversion.					Iron	---	WS
*Copper(chronic) = <u>7.55.6</u> ug/L from immediately above the Upper Thompson Sanitation District's wastewater treatment plant outfall to the Home Supply Canal Diversion.					Iron(T)	---	1000
*Uranium(acute) = See 38.5(3) for details.					Lead	TVS	TVS
*Uranium(chronic) = See 38.5(3) for details.					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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

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

3. Mainstem of the Big Thompson River from the Home Supply Canal diversion to the Big Barnes Ditch diversion.							
COSPBT03	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
Qualifiers:	D.O. (spawning)		---	7.0	Beryllium	---	---
Water + Fish Standards	pH		6.5-9.0	---	Cadmium	TVS	TVS
Other:	chlorophyll a (mg/m2)		---	---	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 12/31/2024			acute	chronic	Chromium-VI	TVS	TVS
	Ammonia		TVS	TVS	Copper	TVS	TVS
	Boron		---	0.75	Iron	---	WS
	Chloride		---	250	Iron(T)	---	4000
	Chlorine		0.019	0.011	Lead	TVS	TVS
	Cyanide		0.005	---	Lead(T)	50	---
	Nitrate		10	---	Manganese	TVS	TVS/WS
	Nitrite		---	0.05	Mercury	---	0.01(t)
	Phosphorus		---	---	Molybdenum(T)	---	150
	Sulfate		---	WS	Nickel	TVS	TVS
	Sulfide		---	0.002	Nickel(T)	---	100
			---	0.002	Selenium	TVS	TVS
			---	0.002	Silver	TVS	TVS(tr)
			---	0.002	Uranium	---	---
			---	0.002	Zinc	TVS	TVS

4a. Mainstem of the Big Thompson from the Big Barnes Ditch diversion to the Greeley-Loveland Canal diversion.							
COSPBT04A	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	---
	Recreation-N	D.O. (mg/L)	---	6.0	Arsenic(T)	---	0.02
	Water-Supply	D.O. (spawning)	---	7.0	Beryllium	---	---
Qualifiers:	pH		6.5-9.0	---	Cadmium	TVS	TVS
Other:	chlorophyll a (mg/m2)		---	---	Cadmium(T)	5.0	---
Temporary Modification(s):	E.-Coli (per 100 mL)	5/1-10/15	---	126	Chromium-III	---	TVS
Arsenic(chronic) = hybrid	E.-Coli (per 100 mL)	10/16-4/30	---	630	Chromium-III(T)	50	---
Expiration Date of 12/31/2024			Inorganic (mg/L)		Chromium-VI	TVS	TVS
	Ammonia		acute	chronic	Copper	TVS	TVS
	Boron		TVS	TVS	Iron	---	WS
	Chloride		---	0.75	Iron(T)	---	4000
	Chlorine		---	250	Lead	TVS	TVS
	Cyanide		0.019	0.011	Lead(T)	50	---
	Nitrate		0.005	---	Manganese	TVS	TVS/WS
	Nitrite		10	---	Mercury	---	0.01(t)
	Phosphorus		---	0.5	Molybdenum(T)	---	150
	Sulfate		---	---	Nickel	TVS	TVS
	Sulfide		---	WS	Nickel(T)	---	100
			---	0.002	Selenium	TVS	TVS
			---	0.002	Silver	TVS	TVS(tr)
			---	0.002	Uranium	---	---
			---	0.002	Zinc	TVS	TVS

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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

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

4b3. Mainstem of the Big Thompson River from the Greeley-Loveland Canal diversion (40.397884, -105.106482) to County Road 11H.								
COSPBT04B	COSPBT03	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture		DM	MWAT		acute	chronic	
Reviewable	Aq Life Warm 1		WS-I	WS-I	Aluminum	---	---	
	Recreation E	5/1-10/15	acute	chronic	Arsenic	340	---	
	Recreation N	10/16-4/30			Arsenic(T)	---	0.02	
	Water Supply				Beryllium	---	---	
Qualifiers:					Cadmium	TVS	TVS	
Other:					Cadmium(T)	5.0	---	
Temporary Modification(s):					Chromium III	---	TVS	
Arsenic(chronic) = hybrid					Chromium III(T)	50	---	
Expiration Date of 12/31/2024					Chromium VI	TVS	TVS	
<u>*Uranium(acute) = See 38.5(3) for details.</u>					Copper	TVS	TVS	
<u>*Uranium(chronic) = See 38.5(3) for details.</u>					Iron	---	WS	
			Inorganic (mg/L)			Iron(T)	---	1000
			acute	chronic	Lead	TVS	TVS	
					Lead(T)	50	---	
					Manganese	TVS	TVS/WS	
					Mercury(T)	---	0.01(t)	
					Molybdenum(T)	---	150	
					Nickel	TVS	TVS	
					Nickel(T)	---	100	
					Selenium	TVS	TVS	
					Silver	TVS	TVS	
					Uranium	--varies*	---varies*	
					Zinc	TVS	TVS	
4e4. Mainstem of the Big Thompson River from County Road 11H to I-25.								
COSPBT04C	COSPBT04	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture		DM	MWAT		acute	chronic	
Reviewable	Aq Life Warm 2		WS-I	WS-I	Aluminum	---	---	
	Recreation E	5/1-10/15	acute	chronic	Arsenic	340	---	
	Recreation N	10/16-4/30			Arsenic(T)	---	7.6	
Qualifiers:					Beryllium	---	---	
Fish Ingestion Standards					Cadmium	TVS	TVS	
Other:					Chromium III	TVS	TVS	
Temporary Modification(s):					Chromium III(T)	---	100	
Arsenic(chronic) = hybrid					Chromium VI	TVS	TVS	
Expiration Date of 12/31/2024					Copper	TVS	TVS	
<u>*Uranium(acute) = See 38.5(3) for details.</u>					Iron(T)	---	1000	
<u>*Uranium(chronic) = See 38.5(3) for details.</u>					Lead	TVS	TVS	
			Inorganic (mg/L)			Manganese	TVS	TVS
			acute	chronic	Mercury(T)	---	0.01(t)	
					Molybdenum(T)	---	150	
					Nickel	TVS	TVS	
					Selenium	TVS	TVS	
					Silver	TVS	TVS	
					Uranium	--varies*	---varies*	
					Zinc	TVS	TVS	
					Sulfide	---	0.002	

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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

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

5. Mainstem of The Big Thompson River from I-25 to the confluence with the South Platte River.						
COSPBT05	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT			
Reviewable	Aq Life Warm <u>21</u> <u>Recreation-N/</u> <u>Water</u> <u>40/46-4/30</u> <u>Supply</u> <u>Recreation PE</u> <u>5/1-10/15</u>	Temperature °C	WS-I	WS-I	Aluminum	acute chronic
			acute	chronic	Arsenic	--- ---
		D.O. (mg/L)	---	5.0	Arsenic(T)	340 ---
		pH	6.5 - 9.0	---	Arsenic(T)	--- <u>400.02</u>
Qualifiers:		chlorophyll a (mg/m ²)	---	---	Beryllium	--- ---
Other:		E. Coli (per 100 mL)	<u>5/1-10/15</u>	---	<u>205126</u>	<u>Cadmium(T)</u> <u>5.0</u> <u>---</u>
<u>Temporary Modification(s):</u>		<u>E.-Coli(per-100-mL)</u> <u>40/46-4/30</u>	---	<u>630</u>	Chromium III	<u>TVS---</u> TVS
<u>Arsenic(chronic) = hybrid</u>					Chromium III(T)	<u>---50</u> <u>400---</u>
<u>Expiration Date of 12/31/2024</u>					Chromium VI	TVS TVS
<u>*Uranium(acute) = See 38.5(3) for details.</u>					Copper	TVS TVS
<u>*Uranium(chronic) = See 38.5(3) for details.</u>					Iron	--- <u>WS</u>
					Iron(T)	--- 1000
					Lead	TVS TVS
					<u>Lead(T)</u>	<u>50</u> <u>---</u>
					Manganese	TVS <u>TVSWS</u>
					Mercury(T)	--- 0.01(†)
					Molybdenum(T)	--- 150
					Nickel	TVS TVS
					<u>Nickel(T)</u>	<u>---</u> <u>100</u>
					Selenium	TVS TVS
					Silver	TVS TVS
					Uranium	<u>--varies*</u> <u>---varies*</u>
					Zinc	TVS TVS
6. All tributaries to the Big Thompson River, including all wetlands, from the Home Supply Canal diversion (<u>40.424430, -105.210449</u>) to the confluence with the South Platte River, <u>except for listings in segments 7, 8, 9, and 10.</u>						
COSPBT06	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT			
UP	Aq Life Warm 2 <u>Water Supply</u> Recreation E	Temperature °C	WS-I	WS-I	Aluminum	acute chronic
			acute	chronic	Arsenic	--- ---
		D.O. (mg/L)	---	5.0	Arsenic(T)	340 ---
		pH	6.5 - 9.0	---	Arsenic(T)	--- <u>7.60.02</u>
Qualifiers:		chlorophyll a (mg/m ²)	---	150	Beryllium	--- ---
Fish Ingestion Standards		E. Coli (per 100 mL)	---	126	Cadmium	TVS TVS
Other:					<u>Cadmium(T)</u>	<u>5.0</u> <u>---</u>
<u>Temporary Modification(s):</u>					Chromium III	<u>TVS---</u> TVS
<u>Arsenic(chronic) = hybrid</u>					Chromium III(T)	<u>---50</u> <u>400---</u>
<u>Expiration Date of 12/31/2024</u>					Chromium VI	TVS TVS
<u>*Uranium(acute) = See 38.5(3) for details.</u>					Copper	TVS TVS
<u>*Uranium(chronic) = See 38.5(3) for details.</u>					Iron	--- <u>WS</u>
					Iron(T)	--- 1000
					Lead	TVS TVS
					<u>Lead(T)</u>	<u>50</u> <u>---</u>
					Manganese	TVS <u>TVSWS</u>
					Mercury(T)	--- 0.01(†)
					Molybdenum(T)	--- 150
					Nickel	TVS TVS
					<u>Nickel(T)</u>	<u>---</u> <u>100</u>
					Selenium	TVS TVS
					Silver	TVS TVS
					Uranium	<u>--varies*</u> <u>---varies*</u>
					Zinc	TVS TVS

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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

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

7. Mainstem of the North Fork of the Big Thompson River from the boundary of Rocky Mountain National Park to the confluence with the Big Thompson River; mainstem of Buckhorn Creek from the source to the confluence with the Big Thompson River.							
COSPBT07	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	---	---	
Qualifiers:		Temperature °C	CS-II	CS-II	Arsenic	340	
Other:	Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2024 *chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 38.5(4). *Phosphorus(chronic) = applies only above the facilities listed at 38.5(4). <u>*Uranium(acute) = See 38.5(3) for details.</u> <u>*Uranium(chronic) = See 38.5(3) for details.</u>	D.O. (mg/L)	---	6.0	Arsenic(T)	---	
		D.O. (spawning)	---	7.0	Beryllium	---	
		pH	6.5 - 9.0	---	Cadmium	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	
		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	

8. Mainstem of the Little Thompson River, including all tributaries and wetlands, from the source to the Culver Ditch diversion. (40.259242, -105.200029).							
COSPBT08	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	---	---	
Qualifiers:		Temperature °C	CS-II	CS-II	Arsenic	340	
Other:	Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2024 <u>*Uranium(acute) = See 38.5(3) for details.</u> <u>*Uranium(chronic) = See 38.5(3) for details.</u>	D.O. (mg/L)	---	6.0	Arsenic(T)	---	
		D.O. (spawning)	---	7.0	Beryllium	---	
		pH	6.5 - 9.0	---	Cadmium	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	
		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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

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

9. Mainstem of the Little Thompson River from the Culver Ditch diversion (40.259242, -105.200029) to the confluence with the Big Thompson River.							
COSPBT09	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT		acute	chronic	
Reviewable	Aq Life Warm <u>21</u>	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
Temporary Modification(s):		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0	---
SeleniumArsenic(chronic) = 12-3 hybrid Expiration Date of 12/31/ 2020 2024		Inorganic (mg/L)			Chromium III	---	TVS
			acute	chronic	Chromium III(T)	50	---
*chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 38.5(4). *Phosphorus(chronic) = applies only above the facilities listed at 38.5(4). <u>*Uranium(acute) = See 38.5(3) for details.</u> <u>*Uranium(chronic) = See 38.5(3) for details.</u>		Ammonia	TVS	TVS	Chromium VI	TVS	TVS
		Boron	---	0.75	Copper	TVS	TVS
		Chloride	---	250	Iron	---	WS
		Chlorine	0.019	0.011	Iron(T)	---	1000
		Cyanide	0.005	---	Lead	TVS	TVS
		Nitrate	10	---	Lead(T)	50	---
		Nitrite	--0.5-	0.5---	Manganese	TVS	TVSWS
		Phosphorus	---	0.17*	Mercury(T)	---	0.01(†)
		Sulfate	---	WS	Molybdenum(T)	---	150
		Sulfide	---	0.002	Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	--varies*	--varies*
					Zinc	TVS	TVS
10. All tributaries to the Little Thompson River, including all wetlands, from the Culver Ditch diversion (40.259242, -105.200029) to the confluence with the Big Thompson River.							
COSPBT10	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	---
		D.O. (mg/L)	---	5.0	Arsenic(T)	---	100
Qualifiers:		pH	6.5 - 9.0	---	Beryllium	---	---
Other:		chlorophyll a (mg/m ²)	---	150*	Cadmium	TVS	TVS
*chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 38.5(4).		E. Coli (per 100 mL)	---	126	Chromium III	TVS	TVS
*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).		Inorganic (mg/L)			Chromium III(T)	---	100
*Uranium(acute) = See 38.5(3) for details. <u>*Uranium(chronic) = See 38.5(3) for details.</u>			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)	---	150
		Nitrite	--0.5-	0.5---	Nickel	TVS	TVS
		Phosphorus	---	0.17*	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

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

11. Carter Lake.							
COSPBT11	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute	chronic		
Reviewable	Aq Life Cold 1	Temperature °C	4/1 - 3/31 CLL varies*	CLL varies*	Aluminum	---	
	Recreation E	Temperature °C	4/1 - 12/31	CLL	22.7	Arsenic	340
Water Supply	DUWS				Arsenic(T)	---	
					Beryllium	---	
Qualifiers:			acute	chronic	Cadmium	TVS	
Other:			D.O. (mg/L)	---	6.0	Cadmium(T)	5.0
<p>*Uranium(acute) = See 38.5(3) for details.</p> <p>*Uranium(chronic) = See 38.5(3) for details.</p> <p>*Temperature =</p> <p>DM and MWAT=CLL from 1/1-3/31</p> <p>DM=22.4 and MWAT=22.7 from 4/1-12/31</p>			D.O. (spawning)	---	7.0	Chromium III	---
			pH	6.5 - 9.0	---	Chromium III(T)	50
			chlorophyll a (ug/L)	---	---	Chromium VI	TVS
			E. Coli (per 100 mL)	---	126	Copper	TVS
			Inorganic (mg/L)			Iron	---
			acute	chronic	Iron(T)	---	1000
			Ammonia	TVS	TVS	Lead	TVS
			Boron	---	0.75	Lead(T)	50
			Chloride	---	250	Manganese	TVS
			Chlorine	0.019	0.011	Mercury(T)	---
			Cyanide	0.005	---	Molybdenum(T)	---
			Nitrate	10	---	Nickel	TVS
			Nitrite	---0.05	0.05---	Nickel(T)	---
			Phosphorus	---	---	Selenium	TVS
			Sulfate	---	WS	Silver	TVS
			Sulfide	---	0.002	Uranium	---varies*
						Zinc	TVS

12. Lake Loveland, Horseshoe Lake, Boyd Lake.							
COSPBT12	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute	chronic		
Reviewable	Aq Life Warm 1	Temperature °C	WL	WL	Aluminum	---	
	Recreation E				Arsenic	340	
Water Supply	DUWS*	D.O. (mg/L)	---	5.0	Arsenic(T)	---	
		pH	6.5 - 9.0	---	Beryllium	---	
Qualifiers:			chlorophyll a (ug/L)	---	---	Cadmium	TVS
Other:			E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0
<p>Temporary Modification(s):</p> <p>Arsenic(chronic) = hybrid</p> <p>Expiration Date of 12/31/2024</p> <p>*Classification: DUWS Applies to Boyd and Loveland Lakes only.</p> <p>*Uranium(acute) = See 38.5(3) for details.</p> <p>*Uranium(chronic) = See 38.5(3) for details.</p>			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	---0.5	0.5---	Manganese	TVS
			Phosphorus	---	---	Mercury(T)	---
			Sulfate	---	WS	Molybdenum(T)	---
			Sulfide	---	0.002	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

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

13. Berthoud Reservoir, Johnstown Reservoir.							
COSPBT13	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT		acute	chronic	
UP	Aq Life Warm 2	Temperature °C	WL	WL	Aluminum	---	---
	Recreation E		acute	chronic	Arsenic	340	---
	Water Supply	D.O. (mg/L)	---	5.0	Arsenic(T)	---	0.02
	DUWS	pH	6.5 - 9.0	---	Beryllium	---	---
Qualifiers:		chlorophyll a (ug/L)	---	---	Cadmium	TVS	TVS
Water + Fish Standards		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0	---
Other:		Inorganic (mg/L)			Chromium III	---	TVS
<p>*Uranium(acute) = See 38.5(3) for details.</p> <p>*Uranium(chronic) = See 38.5(3) for details.</p>			acute	chronic	Chromium III(T)	50	---
		Ammonia	TVS	TVS	Chromium VI	TVS	TVS
		Boron	---	0.75	Copper	TVS	TVS
		Chloride	---	250	Iron	---	WS
		Chlorine	0.019	0.011	Iron(T)	---	1000
		Cyanide	0.005	---	Lead	TVS	TVS
		Nitrate	10	---	Lead(T)	50	---
		Nitrite	---0.5	0.5---	Manganese	TVS	TVS/WS
		Phosphorus	---	---	Mercury(T)	---	0.01(†)
		Sulfate	---	WS	Molybdenum(T)	---	150
		Sulfide	---	0.002	Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	---varies*	---varies*
			Zinc	TVS	TVS		

14. Welch Reservoir, Lonetree Reservoir, Boedecker Lake, Lon Hagler Reservoir.							
COSPBT14	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT		acute	chronic	
Reviewable	Aq Life Warm 1	Temperature °C	WL	WL	Aluminum	---	---
	Recreation E		acute	chronic	Arsenic	340	---
	Water Supply	D.O. (mg/L)	---	5.0	Arsenic(T)	---	0.02
	DUWS*	pH	6.5 - 9.0	---	Beryllium	---	---
Qualifiers:		chlorophyll a (ug/L)	---	---	Cadmium	TVS	TVS
Other:		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0	---
<p>Temporary Modification(s):</p> <p>Arsenic(chronic) = hybrid</p> <p>Expiration Date of 12/31/2024</p> <p>*Classification: DUWS applies to Lonetree Reservoir only.</p> <p>*Uranium(acute) = See 38.5(3) for details.</p> <p>*Uranium(chronic) = See 38.5(3) for details.</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	---0.5	0.5---	Manganese	TVS	TVS/WS
		Phosphorus	---	---	Mercury(T)	---	0.01(†)
		Sulfate	---	WS	Molybdenum(T)	---	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

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

15. All lakes and reservoirs tributary to the Big Thompson River within Rocky Mountain National Park.							
COSPBT15	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture Aq Life Cold 1 Recreation E Water Supply	DM	MWAT	acute chronic			
OW		CL	CL	Aluminum	---	---	
Qualifiers:		acute	chronic	Arsenic	340	---	
Other:		D.O. (mg/L)	---	6.0	Arsenic(T)	---	
<p>*Uranium(acute) = See 38.5(3) for details.</p> <p>*Uranium(chronic) = See 38.5(3) for details.</p>		D.O. (spawning)	---	7.0	Beryllium	---	
		pH	6.5 - 9.0		---	Cadmium	TVS
<p>Ammonia</p> <p>Boron</p> <p>Chloride</p> <p>Chlorine</p> <p>Cyanide</p> <p>Nitrate</p> <p>Nitrite</p> <p>Phosphorus</p> <p>Sulfate</p> <p>Sulfide</p>		Inorganic (mg/L)			Cadmium(T)	5.0	---
		acute	chronic	Chromium III	---	TVS	
		TVS	TVS	Chromium III(T)	50	---	
		---	0.75	Chromium VI	TVS	TVS	
		---	250	Copper	TVS	TVS	
		0.019	0.011	Iron	---	WS	
		0.005	---	Iron(T)	---	1000	
		10	---	Lead	TVS	TVS	
		---	---	Lead(T)	50	---	
		---	WS	Manganese	TVS	TVS/WS	
		---	0.002	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			
16. All lakes and reservoirs tributary to the Big Thompson River from the boundary of Rocky Mountain National Park to the Home Supply Canal diversion- (40.424430, -105.210449). This segment includes Lake Estes and St Mary's Lake.							
COSPBT16	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture Aq Life Cold 1 Recreation E Water Supply DUWS*	DM	MWAT	acute chronic			
Reviewable		CL,CLL	CL,CLL	Aluminum	---	---	
Qualifiers:		acute	chronic	Arsenic	340	---	
Other:		D.O. (mg/L)	---	6.0	Arsenic(T)	---	
<p>Temporary Modification(s):</p> <p>Arsenic(chronic) = hybrid</p> <p>Expiration Date of 12/31/2024</p> <p>*Classification: DUWS applies to St.Mary's Lake and Mirror Lake only.</p> <p>*Uranium(acute) = See 38.5(3) for details.</p> <p>*Uranium(chronic) = See 38.5(3) for details.</p>		D.O. (spawning)	---	7.0	Beryllium	---	
		pH	6.5 - 9.0		---	Cadmium	TVS
<p>Ammonia</p> <p>Boron</p> <p>Chloride</p> <p>Chlorine</p> <p>Cyanide</p> <p>Nitrate</p> <p>Nitrite</p> <p>Phosphorus</p> <p>Sulfate</p> <p>Sulfide</p>		Inorganic (mg/L)			Cadmium(T)	5.0	---
		acute	chronic	Chromium III	---	TVS	
		TVS	TVS	Chromium III(T)	50	---	
		---	0.75	Chromium VI	TVS	TVS	
		---	250	Copper	TVS	TVS	
		0.019	0.011	Iron	---	WS	
		0.005	---	Iron(T)	---	1000	
		10	---	Lead	TVS	TVS	
		---	---	Lead(T)	50	---	
		---	WS	Manganese	TVS	TVS/WS	
		---	0.002	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

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

17. All lakes and reservoirs tributary to the Big Thompson River from the Home Supply Canal diversion (40.424430, -105.210449) to the confluence with the South Platte River, except for specific listings in Segments 12, 14, 18, and 19.

COSPBT17	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute	chronic		
Reviewable	Aq Life Warm 2	Temperature °C	WL	WL	Aluminum	---	---
	Recreation E		acute	chronic	Arsenic	340	---
	Water Supply	D.O. (mg/L)	---	5.0	Arsenic(T)	---	0.02
	<u>DUWS*</u>	pH	6.5 - 9.0	---	Beryllium	---	---
Qualifiers:		chlorophyll a (ug/L)	---	---	Cadmium	TVS	TVS
Water + Fish Standards		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0	---
Other:		Inorganic (mg/L)			Chromium III	---	TVS
Temporary Modification(s):		acute	chronic	Chromium III(T)	50	---	
Arsenic(chronic) = hybrid		Ammonia	TVS	TVS	Chromium VI	TVS	TVS
Expiration Date of 12/31/2024		Boron	---	0.75	Copper	TVS	TVS
<u>*Classification: DUWS applies to Pinewood Lake only.</u>		Chloride	---	250	Iron	---	WS
<u>*Uranium(acute) = See 38.5(3) for details.</u>		Chlorine	0.019	0.011	Iron(T)	---	1000
<u>*Uranium(chronic) = See 38.5(3) for details.</u>		Cyanide	0.005	---	Lead	TVS	TVS
		Nitrate	10	---	Lead(T)	50	---
		Nitrite	<u>---0.5</u>	<u>0.5---</u>	Manganese	TVS	TVS/WS
		Phosphorus	---	---	Mercury(T)	---	0.01(†)
		Sulfate	---	WS	Molybdenum(T)	---	150
		Sulfide	---	0.002	Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	<u>---varies*</u>	<u>---varies*</u>
					Zinc	TVS	TVS

18. All lakes and reservoirs tributary to the Little Thompson River from the source to the Culver Ditch diversion: (40.259242, -105.200029).

COSPBT18	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)	---	0.02
Qualifiers:		D.O. (spawning)	---	7.0	Beryllium	---	---
Other:		pH	6.5 - 9.0	---	Cadmium	TVS	TVS
<u>*Uranium(acute) = See 38.5(3) for details.</u>		chlorophyll a (ug/L)	---	---	Cadmium(T)	5.0	---
<u>*Uranium(chronic) = See 38.5(3) for details.</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)	50	---
		Nitrate	10	---	Manganese	TVS	TVS/WS
		Nitrite	<u>---0.05</u>	<u>0.05---</u>	Mercury(T)	---	0.01(†)
		Phosphorus	---	---	Molybdenum(T)	---	150
		Sulfate	---	WS	Nickel	TVS	TVS
		Sulfide	---	0.002	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

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

19. All lakes and reservoirs tributary to the Little Thompson River from the Culver Ditch diversion ([40.259242, -105.200029](#)) to the confluence with the Big Thompson River, except for specific listings in Segments [segments](#) 11 and 13.

COSPBT19	Classifications	Physical and Biological			Metals (ug/L)		
Designation			DM	MWAT		acute	chronic
Reviewable	Agriculture		WL	WL	Aluminum	---	---
	Aq Life Warm <u>21</u>	Temperature °C			Arsenic	340	---
	Recreation E		acute	chronic	Arsenic(T)	---	0.02-40 ^A
	Water Supply	D.O. (mg/L)	---	5.0	Beryllium	---	---
Qualifiers:		pH	6.5 - 9.0	---	Cadmium	TVS	TVS
Other:		chlorophyll a (ug/L)	---	---	Cadmium(T)	5.0	---
		E. Coli (per 100 mL)	---	126	Inorganic (mg/L)		
					Chromium III	---	TVS
			acute	chronic	Chromium III(T)	50	---
		Ammonia	TVS	TVS	Chromium VI	TVS	TVS
		Boron	---	0.75	Copper	TVS	TVS
		Chloride	---	250	Iron	---	WS
		Chlorine	0.019	0.011	Iron(T)	---	1000
		Cyanide	0.005	---	Lead	TVS	TVS
		Nitrate	10	---	Lead(T)	50	---
		Nitrite	0.5	0.5	Manganese	TVS	TVS/WS
		Phosphorus	---	---	Mercury(T)	---	0.01(†)
		Sulfate	---	WS	Molybdenum(T)	---	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

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

1. Mainstem of the Cache La Poudre River, **and-including** all tributaries and wetlands, within Rocky Mountain National Park and the Rawah, Neota, Comanche Peak, and Cache La Poudre Wilderness Areas.

COSPCP01	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:		pH	6.5 - 9.0	---	Cadmium	TVS	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 12/31/2024					Chromium III(T)	50	---
<u>*Uranium(acute) = See 38.5(3) for details.</u>		Inorganic (mg/L)			Chromium VI	TVS	TVS
<u>*Uranium(chronic) = See 38.5(3) for details.</u>			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)	---	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Cache La Poudre River Basin

2a. Mainstem of the Cache La Poudre River, including all tributaries and wetlands, from the boundaries of Rocky Mountain National Park and the Rawah, Neota, Comanche Peak, and Cache La Poudre Wilderness Areas to a point immediately below the confluence with the South Fork Cache La Poudre River.							
COSPCP02A	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	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 12/31/2024					Chromium III(T)	50	---
*chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 38.5(4).		Inorganic (mg/L)			Chromium VI	TVS	TVS
*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).			acute	chronic	Copper	TVS	TVS
<u>*Uranium(acute) = See 38.5(3) for details.</u>		Ammonia	TVS	TVS	Iron	---	WS
<u>*Uranium(chronic) = See 38.5(3) for details.</u>		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)	---	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Cache La Poudre River Basin

2b. Mainstem of the Cache La Poudre River, including all tributaries and wetlands, from a point immediately below the confluence with the South Fork Cache La Poudre River to the Munroe Gravity Canal Headgate (also known as the North Poudre Supply Canal diversion); 40.691700, -105.255292 , except for listings in segments 1 and 3.						
COSPCP02B	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	acute		chronic
Reviewable	Aq Life Cold 1 Recreation E Water Supply	acute	chronic	acute	chronic	chronic
Qualifiers:		Temperature °C	CS-II	CS-II	Aluminum	---
Other:		D.O. (mg/L)	---	6.0	Arsenic	340
Temporary Modification(s):		D.O. (spawning)	---	7.0	Arsenic(T)	---
Arsenic(chronic) = hybrid		pH	6.5 - 9.0	---	Beryllium	---
Expiration Date of 12/31/2024		chlorophyll a (mg/m ²)	---	150	Cadmium	TVS
<u>*Uranium(acute) = See 38.5(3) for details.</u>		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0
<u>*Uranium(chronic) = See 38.5(3) for details.</u>		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	---	0.11	Mercury(T)	---
		Sulfate	---	WS	Molybdenum(T)	---
		Sulfide	---	0.002	Nickel	TVS
					Nickel(T)	---
					Selenium	TVS
					Silver	TVS
					Uranium	--varies*
					Zinc	TVS
					TVS	TVS

3. Deleted 3. Elkhorn Creek, including all tributaries and wetlands, from the source to the confluence with the Cache La Poudre River.						
COSPCP03	Classifications	Physical and Biological			Metals (ug/L)	
Designation	<u>Agriculture</u>	DM	MWAT	acute		chronic
Reviewable	<u>Aq Life Cold 1</u> <u>Recreation E</u> <u>Water Supply</u>	acute	chronic	acute	chronic	chronic
Qualifiers:		Temperature °C	CS-I	CS-I	Arsenic	340
Other:		D.O. (mg/L)	---	6.0	Arsenic(T)	---
Temporary Modification(s):		D.O. (spawning)	---	7.0	Cadmium	TVS
Arsenic(chronic) = hybrid		pH	6.5 - 9.0	---	Cadmium(T)	5.0
Expiration Date of 12/31/2024		chlorophyll a (mg/m ²)	---	150	Chromium III	---
<u>*Uranium(acute) = See 38.5(3) for details.</u>		E. Coli (per 100 mL)	---	126	Chromium III(T)	50
<u>*Uranium(chronic) = See 38.5(3) for details.</u>		Inorganic (mg/L)			Chromium VI	TVS
		acute	chronic	Copper	TVS	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	---	Molybdenum(T)	---
		Phosphorus	---	0.11	Nickel	TVS
		Sulfate	---	WS	Nickel(T)	---
		Sulfide	---	0.002	Selenium	TVS
					Silver	TVS
					Uranium	varies*
					Zinc	TVS
					TVS	TVS

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

D.O. = dissolved oxygen
 DM = daily maximum
 MWAT = maximum weekly average temperature
 See 38.6 for further details on applied standards.

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

4. Deleted.				
COSPCP04	Classifications	Physical and Biological		Metals (ug/L)
Designation		DM	MWAT	acute chronic
Qualifiers:		acute	chronic	
Other:		Inorganic (mg/L)		
		acute	chronic	
5. Deleted.				
COSPCP05	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

D.O. = dissolved oxygen
 DM = daily maximum
 MWAT = maximum weekly average temperature
 See 38.6 for further details on applied standards.

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

6. Mainstem of the North Fork of the Cache La Poudre River, including all tributaries and wetlands, from the source to the inlet of Halligan Reservoir.							
COSPCP06	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
		D.O. (spawning)	---	7.0	Beryllium	---	---
Qualifiers:		pH	6.5 - 9.0	---	Cadmium	TVS	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 12/31/2024					Chromium VI	TVS	TVS
*Uranium(acute) = See 38.5(3) for details.		Inorganic (mg/L)			Copper	TVS	TVS
*Uranium(chronic) = See 38.5(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	TVS/WS
		Cyanide	0.005	---	Mercury(T)	---	0.01(†)
		Nitrate	10	---	Molybdenum(T)	---	150
		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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

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

7. Mainstem of the North Fork of the Cache La Poudre River, <u>including all tributaries and wetlands</u> , from the inlet of Halligan Reservoir to the confluence with the Cache La Poudre River, except for <u>specific</u> -listings in <u>Segment</u> segments 8 and 20.						
COSPCP07	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT		acute	chronic
		acute	chronic			
Reviewable	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)	---
		D.O. (spawning)	---	7.0	Beryllium	---
Qualifiers:		pH	6.5 - 9.0	---	Cadmium	TVS
Other:		chlorophyll a (mg/m ²)	---	---	Cadmium(T)	5.0
Temporary Modification(s):		E. Coli (per 100 mL)	---	126	Chromium III	---
Arsenic(chronic) = hybrid					Chromium III(T)	50
Expiration Date of 12/31/2024					Chromium VI	TVS
*Uranium(acute) = See 38.5(3) for details.					Inorganic (mg/L)	
*Uranium(chronic) = See 38.5(3) for details.					acute	chronic
		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	---	---	Molybdenum(T)	---
		Sulfate	---	WS	Nickel	TVS
		Sulfide	---	0.002	Nickel(T)	---
					Selenium	TVS
					Silver	TVS
					Uranium	---varies*
					Zinc	TVS
						TVS(tr)

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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

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

8. All tributaries to the North Fork of the Cache La Poudre River, including all wetlands, from the inlet of Halligan Reservoir to the confluence with the Cache La Poudre River, except for specific listings in Segment 9.

GOSPCP08	Classifications	Physical and Biological			Metals (ug/L)		
			DM	MWAT		acute	chronic
Designation Reviewable	Agriculture		CS-II	CS-II	Aluminum	---	---
	Aq-Life-Cold-2	Temperature-°C	CS-II	CS-II	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	TVS	TVS
Water + Fish Standards		pH	6.5-9.0	---	Cadmium(T)	5.0	---
Other:		chlrophyll a (mg/m ²)	---	150*	Chromium-III	---	TVS
Temporary Modification(s):		E. Coli (per 100 mL)	---	126	Chromium III(T)	50	---
Arsenic(chronic) = hybrid					Chromium VI	TVS	TVS
Expiration Date of 12/31/2024		Inorganic (mg/L)			Copper	TVS	TVS
*chlrophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 38.5(4). *Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).			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	---	0.01(t)
		Nitrate	10	---	Molybdenum(T)	---	150
		Nitrite	---	0.05	Nickel	TVS	TVS
		Phosphorus	---	0.11*	Nickel(T)	---	100
		Sulfate	---	WS	Selenium	TVS	TVS
		Sulfide	---	0.002	Silver	TVS	TVS(tr)
					Uranium	---	---
					Zinc	TVS	TVS

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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Cache La Poudre River Basin

~~9. Mainstem of 8. Middle Fork Rabbit Creek, including all tributaries and Lone Pine Creek wetlands, from the source to the confluence with Rabbit Creek. Stonewall Creek, including all tributaries and wetlands, from the source to the confluence with the North Fork of the Cache La Poudre River. North Fork Lone Pine Creek and South Fork Lone Pine Creek, including all tributaries and wetlands, from the source to the confluence with Lone Pine Creek.~~

COSPCP09 COSPCP08	Classifications	Physical and Biological		Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute		chronic
Reviewable	Aq Life Cold 1 Recreation E Water Supply	CS-III	CS-III	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	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 12/31/2024		Inorganic (mg/L)		Chromium III(T)	50	---
		acute	chronic	Chromium VI	TVS	TVS
*chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 38.5(4).		Ammonia	TVS	Copper	TVS	TVS
*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).		Boron	0.75	Iron	---	WS
*Uranium(acute) = See 38.5(3) for details.		Chloride	250	Iron(T)	---	1000
*Uranium(chronic) = See 38.5(3) for details.		Chlorine	0.019	Lead	TVS	TVS
		Cyanide	0.005	Lead(T)	50	---
		Nitrate	10	Manganese	TVS	TVS/WS
		Nitrite	--0.05-	Mercury(T)	---	0.01(†)
		Phosphorus	0.11*	Molybdenum(T)	---	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

~~9. Deleted.~~

COSPCP09	Classifications	Physical and Biological		Metals (ug/L)		
Designation		DM	MWAT	acute		chronic
		acute	chronic			
Qualifiers:						
Other:		Inorganic (mg/L)				
		acute	chronic			

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

D.O. = dissolved oxygen
 DM = daily maximum
 MWAT = maximum weekly average temperature
 See 38.6 for further details on applied standards.

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

10a. Mainstem of the Cache La Poudre River from the Munroe Gravity Canal Headgate (also known as the North Poudre Supply Canal diversion: [40.691700, -105.255292](#)) to a point immediately above the Larimer County Ditch diversion ([40.657656612, -105.485185244](#)).

COSPCP10A	Classifications	Physical and Biological			Metals (ug/L)			
			DM	MWAT		acute	chronic	
Designation	Agriculture							
	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	TVS	
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 12/31/2024					Chromium III(T)	50	---	
<u>*Uranium(acute) = See 38.5(3) for details.</u>		Inorganic (mg/L)			Chromium VI	TVS	TVS	
<u>*Uranium(chronic) = See 38.5(3) for details.</u>			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	<u>---0.05</u>	<u>0.05---</u>	Molybdenum(T)	---	150	
		Phosphorus	---	---	Nickel	TVS	TVS	
		Sulfate	---	WS	Nickel(T)	---	100	
		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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

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

11. Mainstem of the Cache La Poudre River from Shields Street in Ft. Collins to a point immediately above the confluence with Boxelder Creek.							
COSPCP11	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT		acute	chronic	
Reviewable	Aq Life Warm Cold 1 Water Supply Recreation E	Temperature °C	WS-ICS-II	WS-ICS-II	Aluminum	---	---
Qualifiers:		acute	chronic		Arsenic	340	---
Other:	<p>Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2024</p> <p>*Uranium(acute) = See 38.5(3) for details. *Uranium(chronic) = See 38.5(3) for details.</p>	D.O. (mg/L)	---	56.0	Arsenic(T)	---	7-60.02
Inorganic (mg/L)		D.O. (spawning)	---	7.0	Beryllium	---	---
pH		6.5 - 9.0	---		Cadmium	TVS	TVS
chlorophyll a (mg/m ²)		---	---		Cadmium(T)	5.0	---
E. Coli (per 100 mL)		---	126		Chromium III	TVS---	TVS
Ammonia		acute	chronic		Chromium III(T)	---50	400---
Boron		TVS	TVS		Chromium VI	TVS	TVS
Chloride		---	0.75		Copper	TVS	TVS
Chlorine		---	---250-		Iron	---	WS
Cyanide		0.019	0.011		Iron(T)	---	1000
Nitrate		0.005	---		Lead	TVS	TVS
Nitrite		40010	---		Lead(T)	50	---
Phosphorus		---	2.7-		Manganese	TVS	TVS/WS
Sulfate		---	---WS-		Mercury(T)	---	0.01(+)
Sulfide		---	0.002		Molybdenum(T)	---	150
Nickel		---	---		Nickel	TVS	TVS
Selenium		---	---		Nickel(T)	---	100
Silver		---	---		Selenium	TVS	TVS
Uranium		---	---		Silver	TVS	TVS(tr)
Zinc		---	---		Uranium	--varies*	---varies*
Zinc		---	---		Zinc	TVS	TVS

12. Mainstem of the Cache La Poudre River from a point immediately above the confluence with Boxelder Creek to the confluence with the South Platte River.							
COSPCP12	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT		acute	chronic	
Reviewable	Aq Life Warm 1 Water Supply Recreation E	Temperature °C	WS-I	WS-I	Aluminum	---	---
Qualifiers:		acute	chronic		Arsenic	340	---
Other:	<p>Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2024</p> <p>*Uranium(acute) = See 38.5(3) for details. *Uranium(chronic) = See 38.5(3) for details.</p>	D.O. (mg/L)	---	5.0	Arsenic(T)	---	7-60.02
pH		6.5 - 9.0	---		Beryllium	---	---
chlorophyll a (mg/m ²)		---	---		Cadmium	TVS	TVS
E. Coli (per 100 mL)		---	126		Cadmium(T)	5.0	---
Ammonia		acute	chronic		Chromium III	TVS---	TVS
Boron		TVS	TVS		Chromium III(T)	---50	400---
Chloride		---	0.75		Chromium VI	TVS	TVS
Chlorine		---	---250-		Copper	TVS	TVS
Cyanide		0.019	0.011		Iron	---	WS
Nitrate		0.005	---		Iron(T)	---	1000
Nitrite		40010	---		Lead	TVS	TVS
Phosphorus		---	2.7-		Lead(T)	50	---
Sulfate		---	---WS-		Manganese	TVS	TVS/WS
Sulfide		---	0.002		Mercury(T)	---	0.01(+)
Nickel		---	---		Molybdenum(T)	---	150
Selenium		---	---		Nickel	TVS	TVS
Silver		---	---		Nickel(T)	---	100
Uranium		---	---		Selenium	TVS	TVS
Zinc		---	---		Silver	TVS	TVS
Zinc		---	---		Uranium	--varies*	---varies*
Zinc		---	---		Zinc	TVS	TVS

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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

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

13a. All tributaries to the Cache La Poudre River, including all wetlands, from the Munroe Gravity Canal/ Headgate (also known as the North Poudre Supply canal/Canal diversion: 40.691700, -105.255292) to the confluence with the South Platte River, except for specific listings in Segments/segments 6, 7, 8, 13b, and 13c.

COSPCP13A	Classifications	Physical and Biological			Metals (ug/L)			
			DM	MWAT		acute	chronic	
Designation	Agriculture							
	Reviewable	Aq Life Warm <u>21</u>	Temperature °C	WS-I	WS-I	Aluminum	---	---
		Recreation E				Arsenic	340	---
		Water Supply	D.O. (mg/L)	---	5.0	Arsenic(T)	---	0.02-40 ^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
						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)	---	150
						Nickel	TVS	TVS
						Nickel(T)	---	100
						Selenium	TVS	TVS
						Silver	TVS	TVS
						Uranium	---varies*	---varies*
						Zinc	TVS	TVS

Temporary Modification(s):
Arsenic(chronic) = hybrid
Expiration Date of 12/31/2024

*chlorophyll a (mg/m²)(chronic) = applies only above the facilities listed at 38.5(4).
 *Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).
*Uranium(acute) = See 38.5(3) for details.
*Uranium(chronic) = See 38.5(3) for details.

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

D.O. = dissolved oxygen
 DM = daily maximum
 MWAT = maximum weekly average temperature
 See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Cache La Poudre River Basin

43c-13b. Mainstem of Boxelder Creek from its source to a point immediately above Slab Canyon Wash. Mainstems of South Branch of Boxelder Creek, North Branch of Boxelder Creek, and Sand Creek from their sources to their confluences with the mainstem of Boxelder Creek.

COSP13C		Classifications			Physical and Biological			Metals (ug/L)		
Designation			DM	MWAT				acute	chronic	
Reviewable	Agriculture				Temperature °C	CS-I	CS-I	Aluminum	---	---
	Aq Life Cold <u>21</u>							Arsenic	340	---
	Recreation E		acute	chronic	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	TVS
Other:					chlorophyll a (mg/m ²)	---	150	Cadmium(T)	5.0	---
<u>Temporary Modification(s):</u>					E. Coli (per 100 mL)	---	126	Chromium III	---	TVS
<u>Arsenic(chronic) = hybrid</u>					Inorganic (mg/L)			Chromium III(T)	50	---
<u>Expiration Date of 12/31/2024</u>								Chromium VI	TVS	TVS
<u>*Uranium(acute) = See 38.5(3) for details.</u>						acute	chronic	Copper	TVS	TVS
<u>*Uranium(chronic) = See 38.5(3) for details.</u>					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)	---	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

43b-13c. Mainstem of Boxelder Creek from its source to a point immediately above Slab Canyon Wash to the confluence with the Cache La Poudre River.

COSP13B		Classifications			Physical and Biological			Metals (ug/L)		
Designation			DM	MWAT				acute	chronic	
Reviewable	Agriculture				Temperature °C	WS-III	WS-III	Aluminum	---	---
	Aq Life Warm <u>21</u>							Arsenic	340	---
	Recreation N <u>9/16-5/14</u>		acute	chronic	D.O. (mg/L)	---	5.0	Arsenic(T)	---	1000 <u>02</u>
	Recreation P <u>5/15-9/15</u>				pH	6.5 - 9.0	---	Beryllium	---	---
	Water Supply				chlorophyll a (mg/m ²)	---	150*	Cadmium	TVS	TVS
Qualifiers:					E. Coli (per 100 mL)	5/15-9/15	205	Cadmium(T)	<u>5.0</u>	---
Other:					E. Coli (per 100 mL)	9/16-5/14	630	Chromium III	TVS	TVS
<u>Temporary Modification(s):</u>					Inorganic (mg/L)			Chromium III(T)	50	100
<u>Arsenic(chronic) = hybrid</u>						acute	chronic	Chromium VI	TVS	TVS
<u>Expiration Date of 12/31/2024</u>					Ammonia	TVS	TVS	Copper	TVS	TVS
<u>*chlorophyll a (mg/m²)(chronic) = applies only above the facilities listed at 38.5(4).</u>					Boron	---	0.75	Iron	---	WS
<u>*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).</u>					Chloride	---	250	Iron(T)	---	1000
<u>*Uranium(acute) = See 38.5(3) for details.</u>					Chlorine	0.019	0.011	Lead	TVS	TVS
<u>*Uranium(chronic) = See 38.5(3) for details.</u>					Chlorine	0.019	0.011	Lead(T)	<u>50</u>	---
					Cyanide	0.005	---	Manganese	TVS	TVS/WS
					Nitrate	100 <u>10</u>	---	Mercury(T)	---	0.01(†)
					Nitrite	0.5	0.5	Molybdenum(T)	---	150
					Phosphorus	---	0.17*	Nickel	TVS	TVS
					Sulfate	---	WS	Nickel(T)	---	<u>100</u>
					Sulfide	---	0.002	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

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

14. Horsetooth Reservoir.

COSPCP14	Classifications	Physical and Biological		Metals (ug/L)				
Designation		DM	MWAT		acute	chronic		
Reviewable	Agriculture							
	Aq Life Cold 1	Temperature °C	1/1 - 3/31	CLLvaries*	CLLvaries* ^B	Aluminum	---	---
	Recreation E	Temperature °C	4/1 - 12/31	CLL	22.8 ^B	Arsenic	340	---
	Water Supply					Arsenic(T)	---	0.02
	DUWS							
Qualifiers:				acute	chronic			
Other:		D.O. (mg/L)		---	6.0	Cadmium	TVS	TVS
		D.O. (spawning)		---	7.0	Cadmium(T)	5.0	---
		pH		6.5 - 9.0	---	Chromium III	---	TVS
		chlorophyll a (ug/L)		---	---	Chromium III(T)	50	---
		E. Coli (per 100 mL)		---	126	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)	---	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

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

15. Watson Lake.							
COSPCP15	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute chronic			
Reviewable	Aq Life Cold 1 Recreation E Water Supply	CL	CL	Temperature °C	---	---	
Qualifiers:		acute	chronic	Arsenic	340	---	
Other:		---	6.0	Arsenic(T)	---	0.02	
<p>*Uranium(acute) = See 38.5(3) for details.</p> <p>*Uranium(chronic) = See 38.5(3) for details.</p>		---	7.0	D.O. (mg/L)	---	0.02	
		---	---	D.O. (spawning)	---	---	
		6.5 - 9.0	---	pH	TVS	TVS	
		---	---	chlorophyll a (ug/L)	5.0	---	
		---	126	E. Coli (per 100 mL)	---	TVS	
		Inorganic (mg/L)			Chromium III	50	---
		acute	chronic	Chromium III(T)	TVS	TVS	
		TVS	TVS	Chromium VI	TVS	TVS	
		---	0.75	Ammonia	---	WS	
		---	250	Boron	---	1000	
		0.019	0.011	Chloride	TVS	TVS	
		0.005	---	Chlorine	TVS	TVS/WS	
		10	---	Cyanide	---	0.01(†)	
		---	---	Nitrate	---	150	
		---	---	Nitrite	TVS	TVS	
---	WS	Phosphorus	---	100			
---	0.002	Sulfate	TVS	TVS			
---	---	Sulfide	TVS	TVS(tr)			
---	---	Zinc	--varies*	--varies*			
16. Reservoir #4 (T-9-N, R-68-W40.719045, -105.033743), Water Supply Reservoir #3 (T-8-N, R-68-W40.665205, -105.089882), Claymore Lake, College Lake, Dixon Reservoir, Robert Benson Lake, Black Hollow Reservoir, Seeley Lake.							
COSPCP16	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute chronic			
UP	Aq Life Warm 1 Recreation E	WL	WL	Temperature °C	---	---	
Qualifiers:		acute	chronic	Arsenic	340	---	
Other:		---	5.0	Arsenic(T)	---	7.6	
<p>*chlorophyll a (ug/L)(chronic) = applies only above the facilities listed at 38.5(4), applies only to lakes and reservoirs larger than 25 acres surface area.</p> <p>*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4), applies only to lakes and reservoirs larger than 25 acres surface area.</p> <p>*Uranium(acute) = See 38.5(3) for details.</p> <p>*Uranium(chronic) = See 38.5(3) for details.</p>		---	---	D.O. (mg/L)	---	---	
		6.5 - 9.0	---	pH	---	---	
		---	20*	chlorophyll a (ug/L)	TVS	TVS	
		---	126	E. Coli (per 100 mL)	---	TVS	
		Inorganic (mg/L)			Chromium III	TVS	TVS
		acute	chronic	Chromium III(T)	---	100	
		TVS	TVS	Chromium VI	TVS	TVS	
		---	0.75	Ammonia	TVS	TVS	
		---	---	Boron	---	1000	
		0.019	0.011	Chloride	TVS	TVS	
		0.005	---	Chlorine	TVS	TVS	
		100	---	Cyanide	---	0.01(†)	
		---	---	Nitrate	---	150	
		---	---	Nitrite	TVS	TVS	
		---	0.083*	Phosphorus	TVS	TVS	
---	---	Sulfate	TVS	TVS			
---	0.002	Sulfide	TVS	TVS			
---	---	Zinc	--varies*	--varies*			

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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Cache La Poudre River Basin

17. All lakes and reservoirs tributary to the Cache La Poudre River within Rocky Mountain National Park and the Rawah, Neota, Comanche Peak, and Cache La Poudre Wilderness Areas.

COSPCP17	Classifications	Physical and Biological			Metals (ug/L)		
Designation			DM	MWAT		acute	chronic
OW	Agriculture		CL	CL	Aluminum	---	---
	Aq Life Cold 1	Temperature °C			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	TVS	TVS
Other:		pH	6.5 - 9.0	---	Cadmium(T)	5.0	---
*Uranium(acute) = See 38.5(3) for details.		chlorophyll a (ug/L)	---	---	Chromium III	---	TVS
*Uranium(chronic) = See 38.5(3) for details.		E. Coli (per 100 mL)	---	126	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)	---	150
		Phosphorus	---	---	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

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

19. All lakes and reservoirs tributary to the North Fork of the Cache La Poudre River from the source to the inlet of Halligan Reservoir.							
COSPCP19	Classifications	Physical and Biological			Metals (ug/L)		
Designation		DM	MWAT		acute	chronic	
Reviewable	Agriculture						
	Aq Life Cold 1	CL	CL	Aluminum	---	---	
	Recreation E			Arsenic	340	---	
	Water Supply			Arsenic(T)	---	0.02	
Qualifiers:	D.O. (mg/L)	---	6.0				
	D.O. (spawning)	---	7.0	Beryllium	---	---	
Other: *chlorophyll a (ug/L)(chronic) = applies only above the facilities listed at 38.5(4), applies only to lakes and reservoirs larger than 25 acres surface area. *Phosphorus(chronic) = applies only above the facilities listed at 38.5(4), applies only to lakes and reservoirs larger than 25 acres surface area. <u>*Uranium(acute) = See 38.5(3) for details.</u> <u>*Uranium(chronic) = See 38.5(3) for details.</u>	pH	6.5 - 9.0	---	Cadmium	TVS	TVS	
	chlorophyll a (ug/L)	---	8*	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)	---	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Cache La Poudre River Basin

21. All lakes and reservoirs tributary to the Cache La Poudre River from the Munroe Gravity Canal/Headgate (also known as the North Poudre Supply Canal/Canal diversion; 40.691700, -105.255292) to the confluence with the South Platte River, except for specific listings in Segments 14, 15, 16, 19, 20, and 22.

COSPCP21	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute	chronic		
Reviewable	Aq Life Warm 2	Temperature °C	WL	WL	Aluminum	---	---
	Recreation E		acute	chronic	Arsenic	340	---
	Water Supply	D.O. (mg/L)	---	5.0	Arsenic(T)	---	0.02-10 ^A
	DUWS*	pH	6.5 - 9.0	---	Beryllium	---	---
Qualifiers:		chlorophyll a (ug/L)	---	20*	Cadmium	TVS	TVS
Other: *chlorophyll a (ug/L)(chronic) = applies only above the facilities listed at 38.5(4), applies only to lakes and reservoirs larger than 25 acres surface area. *Classification: DUWS applies to North Poudre Reservoir No. 3 only. *Phosphorus(chronic) = applies only above the facilities listed at 38.5(4), applies only to lakes and reservoirs larger than 25 acres surface area. <u>*Uranium(acute) = See 38.5(3) for details.</u> <u>*Uranium(chronic) = See 38.5(3) for details.</u>		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	<u>---0.5</u>	<u>0.5---</u>	Manganese	TVS	TVS/WS
		Phosphorus	---	0.083*	Mercury(T)	---	0.01(†)
		Sulfate	---	WS	Molybdenum(T)	---	150
		Sulfide	---	0.002	Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	<u>---varies*</u>	<u>---varies*</u>
				Zinc	TVS	TVS	

22. Fossil Creek Reservoir.

COSPCP22	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute	chronic		
UP	Aq Life Warm 2	Temperature °C	WL	WL	Aluminum	---	---
	Recreation E		acute	chronic	Arsenic	340	---
Qualifiers:	<u>Fish Ingestion Standards Apply</u>	D.O. (mg/L)	---	5.0	Arsenic(T)	---	<u>1007.6</u>
		pH	6.5 - 9.0	---	Beryllium	---	---
Other: <u>*Uranium(acute) = See 38.5(3) for details.</u> <u>*Uranium(chronic) = See 38.5(3) for details.</u>		chlorophyll a (ug/L)	---	---	Cadmium	TVS	TVS
		E. Coli (per 100 mL)	---	126	Chromium III	TVS	TVS
		Inorganic (mg/L)			Chromium III(T)	---	100
		acute	chronic		Chromium VI	TVS	TVS
		Ammonia	TVS	TVS	Copper	TVS	TVS
		Boron	---	0.75	Iron(T)	---	1000
		Chloride	---	---	Lead	TVS	TVS
		Chlorine	0.019	0.011	Manganese	TVS	TVS
		Cyanide	0.005	---	Mercury(T)	---	0.01(†)
		Nitrate	100	---	Molybdenum(T)	---	150
		Nitrite	<u>---0.5</u>	<u>0.5---</u>	Nickel	TVS	TVS
		Phosphorus	---	---	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Laramie River Basin

1. All tributaries to the Laramie River, including all wetlands, which are within the Rawah Wilderness Area.						
COSPLA01	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 TVS
Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2024 <u>*Uranium(acute) = See 38.5(3) for details.</u> <u>*Uranium(chronic) = See 38.5(3) for details.</u>		chlorophyll a (mg/m ²)	---	---	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	---	---	Molybdenum(T)	--- 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

2a. Mainstem of the Laramie River from the source to the National Forest boundary, and all tributaries and wetlands, from the source to the Colorado/Wyoming border, except for specific listings in Segment 1.						
COSPLA02A	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 TVS
Temporary Modification(s): Arsenic(chronic) = hybrid Expiration Date of 12/31/2024 <u>*Uranium(acute) = See 38.5(3) for details.</u> <u>*Uranium(chronic) = See 38.5(3) for details.</u>		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 ---
		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)	--- 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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Laramie River Basin

2b. Mainstem of the Laramie River from the National Forest boundary to the Colorado/Wyoming border.							
COSPLA02B	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	TVS
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 12/31/2024					Chromium III(T)	50	---
*Uranium(acute) = See 38.5(3) for details.					Chromium VI	TVS	TVS
*Uranium(chronic) = See 38.5(3) for details.					Copper	TVS	TVS
					Iron	---	WS
					Iron(T)	---	1000
					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

3. All lakes and reservoirs tributary to the Laramie River within the Rawah Wilderness Area.							
COSPLA03	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		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	TVS
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	---	TVS
*Uranium(acute) = See 38.5(3) for details.					Chromium III(T)	50	---
*Uranium(chronic) = See 38.5(3) for details.					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)	---	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Laramie River Basin

4. All lakes and reservoirs tributary to the Laramie River from the source to the Colorado/Wyoming border, except for **specific** listings in Segment 3.

COSPLA04	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT		acute	chronic	
Reviewable	Aq Life Cold 1	CL	CL	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	TVS	
		---	8*	Cadmium(T)	5.0	---	
		---	126	Chromium III	---	TVS	
		Inorganic (mg/L)			Chromium III(T)	50	---
		acute	chronic	Chromium VI	TVS	TVS	
		TVS	TVS	Copper	TVS	TVS	
		---	0.75	Iron	---	WS	
		---	250	Iron(T)	---	1000	
		0.019	0.011	Lead	TVS	TVS	
		0.005	---	Lead(T)	50	---	
		10	---	Manganese	TVS	TVS/WS	
		---	0.025*	Mercury(T)	---	0.01(†)	
		---	WS	Molybdenum(T)	---	150	
		---	0.002	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower South Platte River Basin

2a2. All tributaries to the South Platte River, including all wetlands, from the Weld/Morgan County line to the Colorado/Nebraska border, except for the specific listings in Segment 2b.

COSPLS02A/COSPLS02		Classifications			Physical and Biological			Metals (ug/L)		
Designation	Agriculture		DM	MWAT				acute	chronic	
UP	Aq Life Warm <u>21</u>	Temperature °C	WS-II	WS-II			Aluminum	---	---	
	Recreation <u>PE</u>		acute	chronic			Arsenic	340	---	
	Water Supply	D.O. (mg/L)	---	5.0			Arsenic(T)	---	0.02- 40 ^A	
Qualifiers:		pH	6.5 - 9.0	---			Beryllium Cadmium	--- TVS	--- TVS	
Other:		chlorophyll a (mg/m ²)	---	150*			Beryllium(T)	---	4.0	
<u>Temporary Modification(s):</u>		E. Coli (per 100 mL)	---	205 126			Cadmium(T)	5.0	40 ---	
<u>Arsenic(chronic) = hybrid</u>		Inorganic (mg/L)					Chromium III	---	TVS	
<u>Expiration Date of 12/31/2024</u>			acute	chronic			Chromium III(T)	50	100 ---	
*chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 38.5(4).		Ammonia	--- TVS	--- TVS			Chromium VI(T)	50 TVS	100 TVS	
*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).		Boron	---	0.75			Copper	--- TVS	--- TVS	
*Uranium(acute) = See 38.5(3) for details.		Chloride	---	250			Copper(T)	---	200	
*Uranium(chronic) = See 38.5(3) for details.		Chlorine	-0.019	-0.011			Iron	---	WS	
		Cyanide	0. 2005	---			Iron(T)	---	1000	
		Nitrate	10	---			Lead	TVS	TVS	
		Nitrite	-0.5	1.0 ---			Lead(T)	50	100 ---	
		Phosphorus	---	0.17*			Manganese	--- TVS	TVS/WS	
		Sulfate	---	WS			Mercury(T)	---	-0.01	
		Sulfide	---	0. 05 002			Molybdenum(T)	---	150	
							Nickel	--- TVS	--- TVS	
							Nickel(T)	---	100	
							Selenium	--- TVS	--- TVS	
							Selenium(T)	---	20	
							Silver	--- TVS	--- TVS	
							Silver(T)	400	---	
							Uranium	--- varies*	--- varies*	
							Zinc	--- TVS	--- TVS	
							Zinc(T)	---	2000	

2b. All tributaries to the South Platte River, including all wetlands, north of the South Platte River and below 4,500 feet in elevation in Morgan County, north of the South Platte River in Washington County, north of the South Platte River and below 4,200 feet in elevation in Logan County, north of the South Platte River and below 3,700 feet in elevation in Sedgwick County, and the mainstems of Beaver Creek, Bijou Creek and Kiowa Creek from their sources to the confluence with the South Platte River, except for the portion of Beaver Creek from its source to the Fort Morgan Canal.

COSPLS02B		Classifications			Physical and Biological			Metals (ug/L)		
Designation	Agriculture		DM	MWAT				acute	chronic	
UP	Aq Life Warm 2	Temperature °C	WS-II	WS-II			Aluminum	---	---	
	Recreation E		acute	chronic			Arsenic	340	---	
Qualifiers:		D.O. (mg/L)	---	5.0			Arsenic(T)	---	100	
Other:		pH	6.5 - 9.0	---			Beryllium	---	---	
chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 38.5(4).		chlorophyll a (mg/m ²)	---	150			Cadmium	TVS	TVS	
*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).		E. Coli (per 100 mL)	---	126			Chromium III	TVS	TVS	
		Inorganic (mg/L)					Chromium III(T)	---	100	
			acute	chronic			Chromium VI	TVS	TVS	
		Ammonia	TVS	TVS			Copper	TVS	TVS	
		Boron	---	0.75			Iron(T)	---	1000	
		Chloride	---	---			Lead	TVS	TVS	
		Chlorine	0.019	0.011			Manganese	TVS	TVS	
		Cyanide	0.005	---			Mercury	---	0.01(t)	
		Nitrate	100	---			Molybdenum(T)	---	150	
		Nitrite	---	0.5			Nickel	TVS	TVS	
		Phosphorus	---	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

D.O. = dissolved oxygen
 DM = daily maximum
 MWAT = maximum weekly average temperature
 See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower South Platte River Basin

4. All lakes and reservoirs tributary to the South Platte River from the Weld/Morgan County line to the Colorado/Nebraska border, except for ~~specific listings in Segments~~ Segment 3 and 5.

COSPLS04	Classifications	Physical and Biological			Metals (ug/L)		
Designation			DM	MWAT		acute	chronic
Reviewable	Agriculture						
	Aq Life Warm 2	Temperature °C	WL	WL	Aluminum	---	---
	Recreation <u>PE</u>		acute	chronic	Arsenic	340	---
	Water Supply	D.O. (mg/L)	---	5.0	Arsenic(T)	---	0.02-40 ^A
Qualifiers:		pH	6.5 - 9.0	---	BerylliumCadmium	---TVS	---TVS
<u>Water + Fish Standards</u>		chlorophyll a (ug/L)	---	20*	Beryllium(T)	---	4.0
Other:		E. Coli (per 100 mL)	---	<u>205</u> <u>126</u>	Cadmium(T)	5.0	<u>40</u> ---
*chlorophyll a (ug/L)(chronic) = applies only above the facilities listed at 38.5(4), applies only to lakes and reservoirs larger than 25 acres surface area. *Phosphorus(chronic) = applies only above the facilities listed at 38.5(4), applies only to lakes and reservoirs larger than 25 acres surface area. <u>*Uranium(acute) = See 38.5(3) for details.</u> <u>*Uranium(chronic) = See 38.5(3) for details.</u>		Inorganic (mg/L)			Chromium III	---	TVS
			acute	chronic	Chromium III(T)	50	<u>400</u> ---
		Ammonia	---TVS	---TVS	Chromium VI(T)	<u>50</u> TVS	<u>400</u> TVS
		Boron	---	0.75	Copper	---TVS	---TVS
		Chloride	---	250	Copper(T)	---	<u>200</u>
		Chlorine	<u>-0.019</u>	<u>-0.011</u>	Iron	---	WS
		Cyanide	0. <u>2005</u>	---	Iron(T)	---	1000
		Nitrate	10	---	Lead	TVS	TVS
		Nitrite	--- <u>0.5</u>	<u>0.5</u> ---	Lead(T)	50	<u>400</u> ---
		Phosphorus	---	0.083*	Manganese	TVS	TVS/WS
		Sulfate	---	WS	Mercury(T)	---	0.01(†)
		Sulfide	---	0.002	Molybdenum(T)	---	150
					Nickel	---TVS	---TVS
					Nickel(T)	---	100
					Selenium	---TVS	---TVS
					Selenium(T)	---	<u>20</u>
					Silver	---TVS	---TVS
					Silver(T)	400	---
					Uranium	---varies*	---varies*
					Zinc	---TVS	---TVS
					Zinc(T)	---	<u>2000</u>

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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

Lower South Platte River Basin

5. All lakes and reservoirs tributary to the South Platte River north of the South Platte River and below 4,500 feet in elevation in Morgan County, north of the South Platte River in Washington County, north of the South Platte River and below 4,200 feet in elevation in Logan County, north of the South Platte River and below 3,700 feet in elevation in Sedgwick County, and the mainstems of Beaver Creek, Bijou Creek and Kiowa Creek from their sources to the confluence with the South Platte River, except for those specific listings in Segment 3.

COSPLS05	Classifications	Physical and Biological			Metals (ug/L)		
			DM	MWAT	acute	chronic	
Reviewable	Agriculture		WL	WL	Aluminum	---	---
	Aq Life Warm 2	Temperature °C	WL	WL	Arsenic	340	---
	Recreation E		acute	chronic	Arsenic(T)	---	0.02-10 ^A
	Water Supply	D.O. (mg/L)	---	5.0	Arsenic(T)	---	0.02-10 ^A
Qualifiers:		pH	6.5-9.0	---	Beryllium	---	---
Other:		chlorophyll a (ug/L)	---	20 ²	Cadmium	TVS	TVS
¹ chlorophyll a (ug/L)(chronic) = applies only above the facilities listed at 38.5(4), applies only to lakes and reservoirs larger than 25 acres surface area. ² Phosphorus(chronic) = applies only above the facilities listed at 38.5(4), applies only to lakes and reservoirs larger than 25 acres surface area.		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0	---
		Inorganic (mg/L)			Chromium III	---	TVS
			acute	chronic	Chromium III(T)	50	---
		Ammonia	TVS	TVS	Chromium VI	TVS	TVS
		Boron	---	0.75	Copper	TVS	TVS
		Chloride	---	250	Iron	---	WS
		Chlorine	0.019	0.011	Iron(T)	---	1000
		Cyanide	0.005	---	Lead	TVS	TVS
		Nitrate	10	---	Lead(T)	50	---
		Nitrite	---	0.5	Manganese	TVS	TVS/WS
		Phosphorus	---	0.083 ²	Mercury	---	0.01(t)
		Sulfate	---	WS	Molybdenum(T)	---	150
		Sulfide	---	0.002	Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	---	---
					Zinc	TVS	TVS

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

D.O. = dissolved oxygen
 DM = daily maximum
 MWAT = maximum weekly average temperature
 See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Republican River Basin

1. Mainstem of the South Fork of the Republican River from a point 23 miles above the Colorado-Kansas border (39.582154° _N , -102.350838° _W) to the Colorado-Kansas border.							
COSPREF01	Classifications	Physical and Biological			Metals (ug/L)		
Designation		DM	MWAT		acute	chronic	
Reviewable	Agriculture						
	Aq Life Warm 1	WS-I	WS-I	Aluminum	---	---	
	Recreation E	acute	chronic	Arsenic	340	---	
	Water Supply			D.O. (mg/L)	---	5.0	
Qualifiers:				pH	6.5 - 9.0	---	
Other:				chlorophyll a (mg/m ²)	---	---	
Temporary Modification(s):				E. Coli (per 100 mL)	---	126	
Arsenic(chronic) = hybrid		Inorganic (mg/L)			Chromium III	---	TVS
Expiration Date of 12/31/2024					acute	chronic	
*Uranium(acute) = See 38.5(3) for details.				Ammonia	TVS	TVS	
*Uranium(chronic) = See 38.5(3) for details.				Boron	---	0.75	
				Chloride	---	250	
				Chlorine	0.019	0.011	
				Cyanide	0.005	---	
				Nitrate	10	---	
				Nitrite	--0.5-	0.5---	
				Phosphorus	---	---	
				Sulfate	---	WS	
				Sulfide	---	0.002	
					Chromium III(T)	50	
					Chromium VI	TVS	
					Cadmium	TVS	
					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	
2. Deleted.							
COSPREF02	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Republican River Basin

3. Mainstem of the North Fork of the Republican River from the source to the Colorado/Nebraska border and the mainstem, Mainstem of Chief Creek from the source to the confluence with the North Fork of the Republican River.							
COSPRE03	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	---	---
Qualifiers:			acute	chronic	Arsenic	340	---
Other:		D.O. (mg/L)	---	6.0	Arsenic(T)	---	0.02
Temporary Modification(s):		D.O. (spawning)	---	7.0	Beryllium	---	---
Arsenic(chronic) = hybrid		pH	6.5 - 9.0	---	Cadmium	TVS	TVS
Expiration Date of 12/31/2024		chlorophyll a (mg/m ²)	---	150*	Cadmium(T)	5.0	---
*chlorophyll a (mg/m ²)(chronic) = applies only above the facilities listed at 38.5(4).		E. Coli (per 100 mL)	---	126	Chromium III	---	TVS
*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).		Inorganic (mg/L)			Chromium III(T)	50	---
*Uranium(acute) = See 38.5(3) for details.			acute	chronic	Chromium VI	TVS	TVS
*Uranium(chronic) = See 38.5(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)	50	---
		Nitrate	10	---	Manganese	TVS	TVS/WS
		Nitrite	---0.05	0.05---	Mercury(T)	---	0.01(†)
		Phosphorus	---	0.11*	Molybdenum(T)	---	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

4. Mainstem of the Arikaree River from the confluence of the North and South Forks to the Colorado/Kansas border.							
COSPRE04	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture		DM	MWAT		acute	chronic
Reviewable	Aq Life Warm 1 <u>Water Supply</u> Recreation E	Temperature °C	WS-I	WS-I	Aluminum	---	---
Qualifiers:			acute	chronic	Arsenic	340	---
Other:		D.O. (mg/L)	---	5.0	Arsenic(T)	---	7.60.02
Temporary Modification(s):		pH	6.5 - 9.0	---	Beryllium	---	---
Arsenic(chronic) = hybrid		chlorophyll a (mg/m ²)	---	150	Cadmium	TVS	TVS
Expiration Date of 12/31/2024		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0	---
*Uranium(acute) = See 38.5(3) for details.		Inorganic (mg/L)			Chromium III	TVS---	TVS
*Uranium(chronic) = See 38.5(3) for details.			acute	chronic	Chromium III(T)	---50	400---
		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	10010	---	Lead(T)	50	---
		Nitrite	---0.5	0.5---	Manganese	TVS	TVS/WS
		Phosphorus	---	0.17	Mercury(T)	---	0.01(†)
		Sulfate	---	--WS	Molybdenum(T)	---	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Republican River Basin

5. Mainstem of Black Wolf Creek from the source to the confluence with the Arikaree River.							
COSPRE05	Classifications	Physical and Biological			Metals (ug/L)		
Designation		DM	MWAT		acute	chronic	
Reviewable	Agriculture						
	Aq Life Warm 1	Temperature °C	WS-I	WS-I	Aluminum	---	---
	Recreation E		acute	chronic	Arsenic	340	---
	Water Supply	D.O. (mg/L)	---	5.0	Arsenic(T)	---	0.02
Qualifiers:		pH	6.5 - 9.0	---	Beryllium	---	---
Other:		chlorophyll a (mg/m ²)	---	150	Cadmium	TVS	TVS
<u>*Uranium(acute) = See 38.5(3) for details.</u>		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0	---
<u>*Uranium(chronic) = See 38.5(3) for details.</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	---	Lead(T)	50	---
		Nitrite	---0.5-	0.5---	Manganese	TVS	TVSWS
		Phosphorus	---	0.17	Mercury(T)	---	0.01(†)
		Sulfate	---	WS	Molybdenum(T)	---	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Republican River Basin

6. All tributaries to the Republican River system in Colorado, including all wetlands, except for specific listings in Segments segments 1, 3, 4 and 5.

COSPRE06	Classifications	Physical and Biological			Metals (ug/L)		
Designation		DM	MWAT		acute	chronic	
UP	Agriculture						
	Aq Life Warm <u>21</u>	WS-I	WS-I	Aluminum	---	---	
	<u>Water Supply</u>			Arsenic	340	---	
	Recreation P			Arsenic(T)	---	<u>4000.02</u>	
Qualifiers:				Beryllium	---	---	
				Beryllium(T)	---	100	
Other:				Cadmium	<u>---TVS</u>	<u>---TVS</u>	
				Cadmium(T)	<u>---5.0</u>	<u>40---</u>	
				Chromium III	---	<u>---TVS</u>	
				Chromium III(T)	<u>---50</u>	<u>400---</u>	
				Chromium VI	<u>---TVS</u>	<u>---TVS</u>	
				<u>Chromium VI(T)</u>	---	<u>400</u>	
				Copper	<u>---TVS</u>	<u>---TVS</u>	
				<u>Copper(T)</u>	---	<u>200</u>	
				Iron	---	<u>---WS</u>	
				<u>Iron(T)</u>	---	<u>1000</u>	
				Lead	<u>---TVS</u>	<u>---TVS</u>	
				Lead(T)	<u>---50</u>	<u>400---</u>	
				Manganese	<u>---TVS</u>	<u>---TVSWS</u>	
				Mercury(T)	---	<u>---0.01</u>	
				Molybdenum(T)	---	150	
				Nickel	<u>---TVS</u>	<u>---TVS</u>	
				Nickel(T)	---	<u>200100</u>	
				Selenium	<u>---TVS</u>	<u>---TVS</u>	
				<u>Selenium(T)</u>	---	<u>20</u>	
				Silver	<u>---TVS</u>	<u>---TVS</u>	
				Uranium	<u>---varies*</u>	<u>---varies*</u>	
				Zinc	<u>---TVS</u>	<u>---TVS</u>	
				<u>Zinc(T)</u>	---	<u>2000</u>	

*chlorophyll a (mg/m²)(chronic) = applies only above the facilities listed at 38.5(4).
 *Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).
*Uranium(acute) = See 38.5(3) for details.
*Uranium(chronic) = See 38.5(3) for details.

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

D.O. = dissolved oxygen
 DM = daily maximum
 MWAT = maximum weekly average temperature
 See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Republican River Basin

7. Mainstem of the North Fork of the Smoky Hill River and mainstem of the Smoky Hill River, including all tributaries and wetlands, from the source to the Colorado/Kansas border.							
COSPRE07	Classifications	Physical and Biological			Metals (ug/L)		
Designation		DM	MWAT		acute	chronic	
UP	Agriculture Aq Life Warm 2 Recreation NP	Temperature °C	WS-III	WS-III	Aluminum	---	---
			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)	---	630205	Cadmium	TVS	TVS
			Inorganic (mg/L)		Cadmium(T)	---	40
			acute	chronic	Chromium III	TVS	TVS
		Ammonia	TVS	TVS	Chromium III(T)	---	100
		Boron	---	0.75	Chromium VI	TVS	TVS
		Chloride	---	---	Chromium VI(T)	---	400
		Chlorine	0.019	0.011	Copper	TVS	TVS
		Cyanide	0.2005	---	Copper/Iron(T)	---	2001000
		Nitrate	100	---	Iron	---	---
		Nitrite	0.5	40	Lead	TVS	TVS
		Phosphorus	---	0.17*	Lead(T)	---	400
		Sulfate	---	---	Manganese	TVS	TVS
		Sulfide	---	0.002	Mercury(T)	---	0.01
					Molybdenum(T)	---	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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Republican River Basin

9. Bonny Reservoir, Stalker Lake							
COSPRE09	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture		DM	MWAT		acute	chronic
Reviewable	Aq-Life Warm-1	Temperature °C	WL	WL	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 (ug/L)	---	20*	Cadmium	TVS	TVS
		E.-Coli (per 100 mL)	---	426	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	0.049	0.044	Iron(T)	---	4000
		Cyanide	0.005	---	Lead	TVS	TVS
		Nitrate	40	---	Lead(T)	50	---
		Nitrite	---	0.05	Manganese	TVS	TVS/WS
		Phosphorus	---	0.083*	Mercury	---	0.01(t)
		Sulfate	---	WS	Molybdenum(T)	---	150
		Sulfide	---	0.002	Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	---	---
					Zinc	TVS	TVS

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

D.O. = dissolved oxygen
DM = daily maximum
MWAT = maximum weekly average temperature
See 38.6 for further details on applied standards.

Table 2

~~SITE SPECIFIC RADIONUCLIDE STANDARDS*~~

~~(in Picocuries/Liter, except as noted)~~

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

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

~~*Statewide standards also apply for radionuclides not listed above.~~

~~**0.15pCi/l Statewide Basic Standards.~~

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

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS – FOOTNOTES

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

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

Exhibit 2

**City of Black Hawk and Black Hawk-Central City
Sanitation District**

Regulation #38

EXHIBIT 2
CITY OF BLACK HAWK AND BLACK HAWK – CENTRAL CITY SANITATION DISTRICT

DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Water Quality Control Commission

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

5 CCR 1002-38

38.101 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; JUNE 8-9, 2020 RULEMAKING; FINAL ACTION AUGUST 10, 2020; EFFECTIVE DATE DECEMBER 31, 2020

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

The commission extended the following temporary modification:

Clear Creek Segment 13b (COSPCL13b): temporary modification of the temperature standard (expires 12/31/2023). The commission extended this temporary modification from 12/31/2020 to 12/31/2023 to provide time for resolving remaining uncertainty regarding the extent to which instream temperature exceedances are reversible and the extent to which the Black Hawk-Central City Sanitation District (BHCCSD) can implement operational or facility changes to meet the underlying temperature standards in BHCCSD's effluent. This will also allow time for resolving uncertainty regarding what the appropriate standard is to protect the Aquatic Life use. BHCCSD continues to make progress to investigate temperature sources/source control, influent control measures, water management alternatives, potential treatment and treatment optimization options, and the expected effluent quantity and quality that could be achieved with each alternative.

Currently Segment 13b is not meeting the underlying temperature standards, both chronic and acute. There is still uncertainty regarding: 1) the appropriate underlying standard (as well as uncertainty as to what the ultimate aquatic life use will be post-CERCLA clean up) and; 2) the extent to which the existing quality is due to natural or irreversible human-induced conditions. There is also a predicted compliance problem at the BHCCSD wastewater treatment facility (WWTF).

BHCCSD will continue to study temperature source management and treatment at the BHCCSD WWTF to identify options that are technically and economically feasible, which will inform the degree to which instream temperature exceedances are reversible and the extent to which the underlying standards for temperature can be met, so that the correct regulatory pathway can be selected and the need for the Temporary Modification can be eliminated. BHCCSD will also investigate options to reduce temperature in the BHCCSD's effluent which may be implemented during the duration of the temporary modification that do not cause undo financial economic burden, and will further its investigations into options to maintain water quality at the best level

that is reasonably achievable. BHCCSD will provide an update to the commission regarding their progress and their plan to eliminate the temperature temporary modification by the end of 2023 at the Temporary Modifications hearings in 2021, 2022, and 2023.

APPENDIX 38-1

Stream Classifications and Water Quality Standards Tables

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

WATER QUALITY CONTROL COMMISSION

5 CCR 1002-38

REGULATION NO. 38

CLASSIFICATIONS AND NUMERIC STANDARDS

FOR

**SOUTH PLATTE RIVER BASIN, LARAMIE RIVER BASIN
REPUBLICAN RIVER BASIN, SMOKY HILL RIVER BASIN**

Effective 12/31/2020

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

COSPCL13B	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture		DM	MWAT		acute	chronic
UP	Aq Life Cold 2	Temperature °C	CS-I	CS-I	Aluminum	---	---
	Recreation E		acute	chronic	Arsenic	340	---
Qualifiers:		D.O. (mg/L)	---	6.0	Arsenic(T)	---	100
Other:		D.O. (spawning)	---	7.0	Beryllium	---	---
Temporary Modification(s):		pH	6.5 - 9.0	---	Cadmium	TVS	TVS
temperature(DM/MWAT) = current condition		chlorophyll a (mg/m2)	---	150*	Chromium III	TVS	TVS
Expiration Date of 12/31/20202023		E. Coli (per 100 mL)	---	126	Chromium III(T)	---	100
					Chromium VI	TVS	TVS
					Inorganic (mg/L)		
					acute	chronic	
*chlorophyll a (mg/m2)(chronic) = applies only above the facilities listed at 38.5(4).		Ammonia	TVS	TVS	Copper	---	64
*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).		Boron	---	0.75	Iron(T)	---	5400
		Chloride	---	---	Lead	TVS	TVS
		Chlorine	0.019	0.011	Manganese	TVS	TVS
		Cyanide	0.005	---	Mercury	---	0.01(t)
		Nitrate	100	---	Molybdenum(T)	---	150
		Nitrite	---	0.05	Nickel	TVS	TVS
		Phosphorus	---	0.11*	Selenium	TVS	TVS
		Sulfate	---	---	Silver	TVS	TVS(tr)
		Sulfide	---	0.002	Uranium	---	---
					Zinc	---	740

Exhibit 3

Centennial Water & Sanitation District

Regulation #38

DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Water Quality Control Commission

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

5 CCR 1002-38

38.101 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; JUNE 8-9, 2020 RULEMAKING; FINAL ACTION AUGUST 10, 2020; EFFECTIVE DATE DECEMBER 31, 2020

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. Temporary Modifications

The commission extended temporary modifications on the following segments:

Upper South Platte Segment 16g (COSPUS16g), below Centennial WWTF: Temporary modification of the chronic and acute winter temperature standards.

The Commission extended the temporary modification of the chronic and acute temperature standards on Segment 16g during December, January, and February with an expiration date of December 31, 2025, and a narrative operative value of "current conditions." Centennial Water & Sanitation District presented information that shows instream non-attainment of temperature standards, and predicted compliance problems with the water quality based effluent limits (WQBELs) downstream of its discharge during the winter months. The Commission found that there remains significant uncertainty regarding the appropriate winter temperature standards for warm water streams.

The extension of the temporary modification is based on Centennial's demonstration that additional time is needed to resolve the uncertainty with the temperature standards and to determine the appropriate regulatory approach. The Commission reviewed the Plan to Resolve Uncertainty submitted by Centennial in this hearing, and determined that additional time is required to allow for plant expansion, data collection, temperature standards studies, and potential development of a discharger-specific variance. Centennial has committed to providing annual updates to the Division in June through the duration of the temporary modification, beginning in 2021.

16g. Marcy Gulch, including all wetlands from the source to the confluence with the South Platte.							
COSPUS16G	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture	DM	MWAT	acute	chronic		
UP	Aq Life Warm 2	Temperature °C	WS-II	WS-II	Aluminum	---	---
	Recreation E		acute	chronic	Arsenic	340	---
Qualifiers:		D.O. (mg/L)	---	5.0	Arsenic(T)	---	100
Other:		pH	6.5 - 9.0	---	Beryllium	---	---
Temporary Modification(s):		chlorophyll a (mg/m2)	---	---	Cadmium	TVS	TVS
temperature(DM/MWAT) = current condition*	12/1 - 2/29	E. Coli (per 100 mL)	---	126	Chromium III	TVS	TVS
Expiration Date of 12/31/20202025			Inorganic (mg/L)		Chromium III(T)	---	100
			acute	chronic	Chromium VI	TVS	TVS
Copper(acute) = Copper BLM-based FMB Cu FMB(ac)=67.1 ug/l below the Centennial WWTF.		Ammonia	TVS	TVS	Copper	---	TVS
Copper(chronic) = Copper BLM-based FMB Cu FMB(ch)=43.3 ug/l below the Centennial WWTF.		Boron	---	0.75	Copper	TVS	---
*Selenium(acute) = See section 38.6(4)(b) for assessment locations.		Chloride	---	---	Iron(T)	---	1000
*Selenium(chronic) = See section 38.6(4)(b) for assessment locations.		Chlorine	0.019	0.011	Lead	TVS	TVS
*TempMod: temperature(12/1 - 2/29) = downstream of Centennial WWTF		Cyanide	0.005	---	Manganese	TVS	TVS
		Nitrate	100	---	Mercury	---	0.01(t)
		Nitrite	---	0.5	Molybdenum(T)	---	---
		Phosphorus	---	---	Nickel	TVS	TVS
		Sulfate	---	---	Selenium	21*	13*
		Sulfide	---	0.002	Silver	TVS	TVS
					Uranium	---	---
					Zinc	TVS	TVS

Exhibit 4
MillerCoors
Regulation #38

DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Water Quality Control Commission

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

5 CCR 1002-38

38.101 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; JUNE 8-9, 2020 RULEMAKING; FINAL ACTION AUGUST 10, 2020; EFFECTIVE DATE DECEMBER 31, 2020

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. Clear Creek Segment 15

The commission reviewed the antidegradation designation for Clear Creek 15 (COSPCL15). Based on the available water quality data and additional information on the record, the Commission determined that Clear Creek Segment 15 does not warrant the special protection provided by the antidegradation review process and therefore should have the Use Protected designation.

Segment 15 is classified as aquatic life warm class 1 with the "goal qualifier." The goal qualifier indicates that the water is presently not fully suitable for the aquatic life warm class 1 use but is intended to become fully suitable for the classified use. Available data show that the segment does not attain the chronic recreation standard for *E. coli*, the chronic aquatic life standards for ammonia and temperature, the chronic water+fish standard for total arsenic, and the chronic water supply standards for dissolved iron and dissolved manganese. In addition, the Commission found that the aquatic life use is impaired by organic sediment. Therefore, the Commission determined that Segment 15 should have the use protected designation pursuant to C.R.S. § 25-8-209(4) and Regulation 31, Sections 31.8(2)(b)(ii) and 31.8(2)(b)(iii)(B).

15. Mainstem of Clear Creek from Youngfield Street in Wheat Ridge, Colorado, to the confluence with the South Platte River.							
COSPCL15	Classifications	Physical and Biological			Metals (ug/L)		
Designation		DM	MWAT		acute	chronic	
ReviewableUP Agriculture Aq Life Warm 1* Recreation E Water Supply		Temperature °C	WS-II	WS-II	Aluminum	---	---
			acute	chronic	Arsenic	340	---
		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 12/31/2024 *Classification: Aquatic life warm 1 goal qualifier. *Zinc(acute) = TVS x (times) the FWER (final water effect ratio). Expiration date of 12/31/20. *Zinc(chronic) = TVS x (times) the FWER (final water effect ratio). Expiration date of 12/31/20.		chlorophyll a (mg/m2)	---	---	Cadmium	TVS	TVS
		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0	---
		Inorganic (mg/L)			Chromium III	---	TVS
			acute	chronic	Chromium III(T)	50	---
		Ammonia	TVS	TVS	Chromium VI	TVS	TVS
		Boron	---	0.75	Copper	TVS	TVS
		Chloride	---	250	Iron	---	WS
		Chlorine	0.019	0.011	Iron(T)	---	1000
		Cyanide	0.005	---	Lead	TVS	TVS
		Nitrate	10	---	Lead(T)	50	---
		Nitrite	---	0.5	Manganese	TVS	TVS/WS
		Phosphorus	---	---	Mercury	---	0.01(t)
		Sulfate	---	WS	Molybdenum(T)	---	150
		Sulfide	---	0.002	Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
				Uranium	---	---	
				Zinc	TVSx1.57*	TVSx1.57*	

Exhibit 5
London Mine
Regulation #38

2b. Mainstem of Mosquito Creek from the confluence with South Mosquito Creek to its confluence-the Middle Fork of the South Platte River.							
COSPUS02B	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)	---	<u>7.60-92</u>
Qualifiers:		D.O. (spawning)	---	7.0	Beryllium	---	---
Other:		pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS
Temporary Modification(s):		chlorophyll a (mg/m2)	---	---	Cadmium(T)	--- 5.0	---
Arsenic(chronic) = hybrid		E. Coli (per 100 mL)	---	126	Chromium III	---	TVS
Expiration Date of 12/31/2024					Chromium III(T)	--- 50	<u>100</u> ---
		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	TVSWS
		Nitrate	<u>10</u>	---	Mercury	---	0.01(t)
		Nitrite	<u>10</u> ---	--- 0.05	Molybdenum(T)	---	150
		Phosphorus	---	---	Nickel	TVS	TVS
		Sulfate	---	--- WS	Nickel(T)	---	--- 400
		Sulfide	---	0.002	Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	---	---
					Zinc	---	220

2c. South Mosquito Creek from the source to confluence with Mosquito Creek and No Name Creek from the source to the confluence with South Mosquito Creek.							
COSPUS02C	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)	---	<u>7.60-92</u>
Qualifiers:		D.O. (spawning)	---	7.0	Beryllium	---	---
Other:		pH	6.5 - 9.0	---	Cadmium	TVS(tr)	TVS
Temporary Modification(s):		chlorophyll a (mg/m2)	---	150	Cadmium(T)	--- 5.0	---
Arsenic(chronic) = hybrid		E. Coli (per 100 mL)	---	126	Chromium III	---	TVS
Expiration Date of 12/31/2024					Chromium III(T)	--- 50	<u>100</u> ---
		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	TVSWS
		Nitrate	<u>10</u>	---	Mercury	---	0.01(t)
		Nitrite	<u>10</u> ---	--- 0.05	Molybdenum(T)	---	150
		Phosphorus	---	0.11	Nickel	TVS	TVS
		Sulfate	---	--- WS	Nickel(T)	---	--- 400
		Sulfide	---	0.002	Selenium	TVS	TVS
					Silver	TVS	TVS(tr)
					Uranium	---	---
					Zinc	---	280

**38.101 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; JUNE 8-9, 2020
RULEMAKING; FINAL ACTION AUGUST 10, 2020; EFFECTIVE DATE DECEMBER 31, 2020**

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

South Mosquito Creek and Upper Mosquito Creek

Water Supply: The Commission removed the Water Supply use classifications and standards from South Mosquito Creek (segment 2c) and Mosquito Creek (segment 2b). Evidence was presented that demonstrated that the Water Supply use does not currently exist, has not existed since 1978, and is not reasonably expected in the future due to the elevation and remote nature of the area.

Exhibit 6

Metro Wastewater Reclamation District

Regulation #38

DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Water Quality Control Commission

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

5 CCR 1002-38

38.101 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; JUNE 8-9, 2020 RULEMAKING; FINAL ACTION AUGUST 10, 2020; EFFECTIVE DATE DECEMBER 31, 2020

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. Upper South Platte Segment 15 and Middle South Platte Segment 1a

The commission reviewed the antidegradation designations for Upper South Platte River Segment 15 (COSPUS15) and Middle South Platte River Segment 1a (COSPMS01a). Based on the available water quality data and additional information on the record, the Commission determined that Segments 15 and Segment 1a should retain the Use Protected designation.

Upper South Platte Segment 15: Segment 15 is classified as aquatic life warm class 2. Available data show that the segment does not attain the chronic recreation standard for *E. coli*, the chronic aquatic life standards for dissolved cadmium and temperature, and the chronic water supply standards for total cadmium, sulfate and chloride. Therefore, the Commission determined that Segment 15 should retain its use protected designation pursuant to C.R.S. § 25-8-209(4) and Regulation 31, Sections 31.8(2)(b)(ii) and 31.8(2)(b)(iii)(B).

Middle South Platte Segment 1a: Segment 1a is classified as aquatic life warm class 2. Available data show that the segment does not attain the chronic recreation standard for *E. coli*, the chronic water+fish standard for arsenic, and the chronic water supply standard for manganese. Therefore, the Commission determined that Segment 1a should retain its use protected designation pursuant to C.R.S. § 25-8-209(4) and Regulation 31, Sections 31.8(2)(b)(ii) and 31.8(2)(b)(iii)(B).

Exhibit 7

Plum Creek Water Reclamation Authority

Regulation #38

DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Water Quality Control Commission

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

5 CCR 1002-38

38.101 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; JUNE 8-9, 2020 RULEMAKING; FINAL ACTION AUGUST 10, 2020; EFFECTIVE DATE DECEMBER 31, 2020

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. Temporary Modifications

The commission extended temporary modifications on the following segments:

Upper South Platte Segment 10a (COSPUS10a), Plum Creek and East Plum Creek below PCWRA's discharge: Temporary modification of the chronic winter temperature standards.

The Commission extended the temporary modification of the chronic temperature standards on Segment 10a during December, January, and February with an expiration date of December 31, 2025, and a narrative operative value of "current conditions." Plum Creek Water Reclamation Authority (PCWRA) presented information that shows instream non-attainment and predicted compliance problems with the chronic water quality based effluent limit (WQBEL) downstream of its discharge during the winter months. The Commission found that there remains significant uncertainty regarding the appropriate winter temperature standards for warm water streams.

The extension of the temporary modification is based on PCWRA's demonstration that additional time is needed to resolve the uncertainty with the temperature standards and to determine the appropriate regulatory approach. The Commission reviewed the Plan to Resolve Uncertainty submitted by PCWRA in this hearing, and determined that additional time is required to allow for plant expansion, data collection, temperature standards studies, and potential development of a discharger-specific variance. PCWRA has committed to providing annual updates to the Division in June through the duration of the temporary modification, beginning in 2021.

APPENDIX 38-1 Stream Classifications and Water Quality Standards Tables

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

WATER QUALITY CONTROL COMMISSION

5 CCR 1002-38

REGULATION NO. 38

CLASSIFICATIONS AND NUMERIC STANDARDS

FOR

SOUTH PLATTE RIVER BASIN, LARAMIE RIVER BASIN

REPUBLICAN RIVER BASIN, SMOKY HILL RIVER BASIN

Effective 12/31/2020

10a. Mainstems of East Plum Creek, West Plum Creek, and Plum Creek from the boundary of National Forest lands to Chatfield Reservoir, mainstems of Stark Creek and Gove Creek from the boundary of National Forest lands to their confluence.

COSPUS10A	Classifications	Physical and Biological			Metals (ug/L)		
Designation	Agriculture		DM	MWAT		acute	chronic
Reviewable	Aq Life Warm 1	Temperature °C	WS-I	WS-I	Aluminum	---	---
	Recreation E		acute	chronic	Arsenic	340	---
	Water Supply	D.O. (mg/L)	---	5.0	Arsenic(T)	---	0.02
Qualifiers:		pH	6.5 - 9.0	---	Beryllium	---	---
Other:		chlorophyll a (mg/m2)	---	150*	Cadmium	TVS	TVS
Temporary Modification(s):		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0	---
Arsenic(chronic) = hybrid		Inorganic (mg/L)			Chromium III	---	TVS
Expiration Date of 12/31/2024			acute	chronic	Chromium III(T)	50	---
temperature(MWAT) = current condition* 12/1 - 2/29		Ammonia	TVS	TVS	Chromium VI	TVS	TVS
Expiration Date of 12/31/ 2020 2025		Boron	---	0.75	Copper	TVS	TVS
*chlorophyll a (mg/m2)(chronic) = applies only above the facilities listed at 38.5(4).		Chloride	---	250	Iron	---	WS
*Phosphorus(chronic) = applies only above the facilities listed at 38.5(4).		Chlorine	0.019	0.011	Iron(T)	---	1000
*TempMod: temperature(12/1 - 2/29) = East Plum Creek and Plum Creek below the PCWRA discharge.		Cyanide	0.005	---	Lead	TVS	TVS
		Nitrate	10	---	Lead(T)	50	---
		Nitrite	---	0.5	Manganese	TVS	TVS/WS
		Phosphorus	---	0.17*	Mercury	---	0.01(t)
		Sulfate	---	WS	Molybdenum(T)	---	150
		Sulfide	---	0.002	Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	---	---
					Zinc	TVS	TVS

Exhibit 8
Raytheon
Regulation #38

PROPOSAL OF THE RAYTHEON COMPANY

REGULATION #38 STREAM CLASSIFICATIONS AND WATER QUALITY STANDARDS

ST. VRAIN SUBBASIN SEGMENT 06

6. All tributaries to St. Vrain Creek, including wetlands from Hygiene Road to the confluence with the South Platte River, except for specific listings in the Boulder Creek subbasin and in Segments 4a, 4b, 4c and 5.						
COSPSV06	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture	DM	MWAT	acute	chronic	
UP	Aq Life Warm 2 Recreation E	Temperature °C	WS-II	WS-II	Aluminum	---
			acute	chronic	Arsenic	---
Qualifiers:		D.O. (mg/L)	---	5.0	Arsenic(T)	340
Other:		pH	6.5 - 9.0	---	Beryllium	---
Temporary Modification(s):		chlorophyll a (mg/m2)	---	---	Cadmium	TVS
Iron(chronic) = current condition		E. Coli (per 100 mL)	---	126	Chromium III	TVS
<u>Manganese(ac/eh) = current condition</u>					Chromium III(T)	---
Expiration Date of <u>12/31/2020</u> <u>12/31/2023</u>					Chromium VI	TVS
					Copper	TVS
					Iron(T)	---
					Lead	TVS
					Manganese	TVS
					Mercury	---
					Molybdenum(T)	---
					Nickel	TVS
					Selenium	TVS
					Silver	TVS
					Uranium	---
					Zinc	TVS

PROPOSAL OF THE RAYTHEON COMPANY

REGULATION #38 STREAM CLASSIFICATIONS AND WATER QUALITY STANDARDS

ST. VRAIN SUBBASIN SEGMENT 07

7. Boulder Reservoir, Coot Lake, Left Hand Valley Reservoir and Spurgeon Reservoir.							
COSPSV07	Classifications	Physical and Biological			Metals (ug/L)		
Designation		DM	MWAT		acute	chronic	
Reviewable	Agriculture						
	Aq Life Warm 1	Temperature °C	WL	WL	Aluminum	---	---
	Recreation E		acute	chronic	Arsenic	340	---
	Water Supply	D.O. (mg/L)	---	5.0	Arsenic(T)	---	0.02
DUWS*		pH	6.5 - 9.0	---	Beryllium	---	---
		chlorophyll a (ug/L)	---	---	Cadmium	TVS	TVS
Qualifiers:		E. Coli (per 100 mL)	---	126	Cadmium(T)	5.0	---
Other:		Inorganic (mg/L)			Chromium III	---	TVS
Temporary Modification(s):			acute	chronic	Chromium III(T)	50	---
Arsenic(chronic) = hybrid		Ammonia	TVS	TVS	Chromium VI	TVS	TVS
Expiration Date of 12/31/2024		Boron	---	0.75	Copper	TVS	TVS
Iron(chronic) = current condition		Chloride	---	250	Iron	---	WS
Manganese(ac/ch) = current condition		Chlorine	0.019	0.011	Iron(T)	---	1000
Expiration Date of 12/31/2020		Cyanide	0.005	---	Lead	TVS	TVS
*Classification: DUWS applies to Boulder, Spurgeon and Left Hand Valley Reservoirs only.		Nitrate	10	---	Lead(T)	50	---
		Nitrite	---	0.5	Manganese	TVS	TVS/WS
		Phosphorus	---	---	Mercury	---	0.01(t)
		Sulfate	---	WS	Molybdenum(T)	---	150
		Sulfide	---	0.002	Nickel	TVS	TVS
					Nickel(T)	---	100
					Selenium	TVS	TVS
					Silver	TVS	TVS
					Uranium	---	---
					Zinc	TVS	TVS

PROPOSAL OF THE RAYTHEON COMPANY

38.100 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; JUNE 8, 2020 RULEMAKING; FINAL ACTION AUGUST 10, 2020; EFFECTIVE DATE DECEMBER 31, 2020

St Vrain Segments 06 (unnamed drainage COSPSV06) and 07 (Left Hand Valley Reservoir COSPSV07): temporary modifications for total recoverable iron and acute and chronic dissolved manganese (expiration of 12/31/2020). For Segment 06, the commission adopted an extension to the temporary modification for total recoverable iron until 12/31/2023 and has removed the temporary modification for manganese. For Segment 07, the commission has removed the temporary modifications for iron and manganese as the water quality standards are being attained. Based on information provided by the Raytheon Company and the original plan to resolve uncertainty, Raytheon has determined that the underlying standard for manganese (TVS) on Segment 06 is being attained, however, a site-specific standard for total recoverable iron on Segment 06 may be relevant based on ambient water quality and aquatic life information. Water quality results for iron on several drainages in the area show concentrations greater than the underlying standard. As these drainages rarely have flow, an extension to the temporary modification is needed to conduct additional sampling and to evaluate the aquatic life species (macroinvertebrates) present on both the unnamed drainage where the discharge (seeps) are located and the nearby drainages, to develop an alternatives analysis. Although minimal data exists for Left Hand Valley Reservoir (Segment 07), the standards for iron and manganese are being attained. Raytheon has provided an updated plan to resolve uncertainty addressing the additional water quality data and macroinvertebrate collection needed to propose a site-specific iron standard on Segment 06. The commission has extended the “current condition” temporary modification for iron on Segment 06 until 12/31/2023.